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# THE LANCET.

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ABSTRACT OF

# An Address

ON

# THE RELATIONS OF THE MEMBERS OF THE MEDICAL PROFESSION TO EACH OTHER AND TO THE PUBLIC.

*Delivered in the Medical Institute, Belfast, on Dec. 11th, at the Opening Meeting of the Ulster Medical Society, Session 1902–03,*

By JOHN CAMPBELL, M.A., M.D. R.U.I.,

SENIOR PHYSICIAN TO THE SAMARITAN HOSPITAL FOR WOMEN, BELFAST; ASSISTANT PHYSICIAN TO THE BELFAST MATERNITY HOSPITAL.

GENTLEMEN,—My first duty is to convey to you my sincere thanks for the honour you have done me in electing me to the presidential chair of the Ulster Medical Society. To be at any time chosen to fill such a position is a distinction of no little importance, not only on account of the antiquity of the society and the traditions with which its name is associated, but also on account of the eminence of my predecessors in office. Since the foundation of the society the most prominent medical men in the city have in their time been in the position which I now occupy. Representatives of the purely scientific departments of our profession, men eminent as practitioners, and men engaged in special fields of work have given the presidential chair a dignity and an importance which have increased year by year and have culminated in the efforts of Sir William Whitla, to whom we owe this noble hall of assembly and an unprecedented increase in the membership and activity of the society.

It is an especial pleasure to me to occupy the chair at the present time. To be the first to preside over our meetings in the new institute is a source of present gratification and to have been the first will hereafter provide a delightful retrospect. This feeling of pleasure is enhanced by the fact that I succeed the founder of the institute and that I now preside over a larger society with a more varied and extensive programme than it has ever had. The very importance of the position to which you have elected me has, however, been a source of some embarrassment to me in the selection of a topic on which to address you. The historical and biographical themes have been so ably dealt with in the recent past that I could not turn to them. Some special subject in which I was myself interested had charms for me, but I felt that I could not on the present occasion allow myself to be drawn aside into the bye-ways of surgery, however gratifying such an excursion might have proved to myself. I have therefore chosen to address you on a wider subject, a subject which will, I think, interest every member of my audience and arouse feelings of agreement or dissent in the breasts of many of the listeners. The title I have given the address which I am about to deliver is "The Relations of the Members of the Medical Profession to each other and to the Public."

In Belfast we are singularly fortunate in having a medical family the members of which are, on the whole, very well united. It is inevitable that differences will occur; disputes and quarrels are, however, rare. The late Lawson Tait is reputed to have said that a more friendly feeling existed between the medical men of Belfast than between those of any other similar community with which he was acquainted. The man who uttered this statement was not given to making complimentary speeches and I think that we may fairly congratulate ourselves on the truth of it. But good as our relations with one another are, they might be still better. Everyone is familiar with the axiom that the observance of medical etiquette consists in "doing to others as we would be done by," but few of us have, I am afraid, taken the trouble to study the rules which are laid down for the application of this general principle to special circumstances. Perhaps I would not be wrong in saying that a good many of us are unaware that a printed code of etiquette has been drawn up by this society and is in existence. Possibly, I might even without fear of correction affirm that many practising members of the profession are ignorant that a book containing rules for our guidance in almost all circumstances has been published by a deceased English physician and has received a sort of semi-official recognition from the profession as a whole. The perusal of the code of medical ethics should invariably precede the start in practice. The knowledge gained therefrom would prevent many an unintentional mistake in conduct and would smooth the thorny path of the struggling young practitioner. An occasional glance at its pages might be beneficial to even the more mature practitioners. The calling up of etiquette to cover what has been done rather than to guide us in the doing has brought the term into public contempt which can only be removed by our strict adherence to the letter and to the spirit of the code of ethics. This adherence we cannot give till we have read and pondered over the book.

The relations of a family medical attendant to his patients are of such a character as exists in no other line of life but the medical. The ties between physician and patient are often strong personal ones and the feeling of friendship often dominates the physician's business instincts. That this should be so is creditable to our profession, though it is liable to be used to our disadvantage. We as members of a great profession should above all things stand up for our order. We should be loyal to one another. In all cases where one is represented in a bad light to another we should reserve judgment till we have assured ourselves that our *confrère* is as black as he is painted. Each man of us should do his duty to the public, but he should also do his duty to his professional brethren. The friendly intercourse which this institute will enable us to have with one another should do much to break down misunderstandings and to disseminate a feeling of confidence in each other. By so doing the institute will fulfil a most important part of its work, fostering lofty sentiment and cementing professional relations and broadening out the views of the members.

While the relationships of general practitioners towards each other are often delicate and complicated, those of the consultant to the family medical attendant are even more so. The difficulties in the way of the ideal consultant are twofold: those put before him by the public and those raised by the profession. A certain proportion of men and women regard the medical fraternity as a band of guessers. They go from one to another in search of a diagnosis or of a remedy in the hope that they may some day meet with a man who will guess right. Such people are very desirous of "independent opinions" and are so suspicious of collusion on the part of their advisers that they strenuously oppose any communication between them. Each opinion is to them a different one, though to the initiated the distinction is rather in the wording than in the meaning, and each prescription is a new line of treatment, though they all contain drugs of similar action. Persons of this habit of mind seriously hinder a man who strives after the position of the ideal consultant. Not less obstructive to him is the attitude of some of his colleagues. When a patient surreptitiously visits a consultant and the latter communicates the fact to the family medical attendant the result is not always satisfactory. At one time the family medical attendant will feel aggrieved at the patient, at another he will bear the consultant an unmerited grudge. Thus it comes about that the consultant keeps his own counsel and the patient goes on using his prescription without proper supervision. Such a state of things should surely be changed for the better. At the present time, when the profession has been levelled up until no great inequality exists between its members in respect of their knowledge, a consultant's task, when called in by a friend, is a comparatively easy one. He has but to confirm the diagnosis and to express his approval of the treatment. It is but seldom that any material difference of opinion as to the nature and treatment of a case can exist. The cases in which a complete change of diagnosis or of treatment is necessary are happily few. When distant or metropolitan consultants are called in to meet the local men, it is necessary for the latter to be very slow about accepting a radical change of diagnosis or treatment and, unless they are convinced of the wisdom of the change, to protest against it in no uncertain way. The men who have had ample opportunities of watching the case are more likely to have a thorough grasp of its requirements than a consultant who gets an imperfect appreciation of its nature at one brief and hurried visit. Lives have been lost or shortened by hasty

changes which the patient and his relatives had hailed with delight.

The duties of the profession to the public are unique in character. We require to be ready to respond to urgent cases at all times and seasons and to do our best for our patient regardless of our own feelings or convenience. We have to act as advisers, confessors, and friends. We must constantly be on the alert to prevent selfishness from interfering with the higher duties of our calling. We have to avoid narrowness and faddishness in our practice. We have—and this is perhaps our hardest duty—to fight against the feeling of contempt for men and women which contact with the baser natures we so often meet is apt to engender. While the ancient traditions and customs of our profession are a great help to us in maintaining a proper line of conduct towards our clients there are unfortunately no such guides for the public in their behaviour towards us. As regards his medical adviser each man is a law unto himself. Most people in their secret hearts think they are born with a certain amount of knowledge of disease and have strong and frequently ludicrous opinions as to their ailments. They expect to be made able to understand all about their complaints in a five minutes' interview and this often involves the presentation of some very crude or absurdly mechanical idea to them. Should a medical man fail to make his hearers feel that they understand him they will usually conclude that his mind is as befogged as their own. That death comes to all is a commonplace, yet how seldom do medical men see death coming at what the patient and his relatives regard as the right time. He nearly always is thought to come too soon, and the feeling not infrequently arises that his visit might have been postponed had the medical advisers been more skilful and more strenuous. For the larger proportion of the public in whose service we spend our lives we can have nothing but admiration. They trust us as honourable men; they are loyal to us; they are straightforward with us. There are, however, a minority of them who merit no gratitude at our hands. These include the malicious gossips, the blackmailers, and the abusive debtors. Wholly to avoid them is an impossibility, but the existence of medical protection societies is an important means of keeping them in check. I question if we, as a profession, would not improve our position by occasionally calling to account our detractors. Certainly no men in any other line of life would condone the calumnies which we sometimes pass over. As with nations, so with men, magnanimity may be mistaken for weakness. In addition to the above general matters in which the public owe us more consideration there are others of a more restricted and special nature. I refer to hospital abuse, clubs, poor-law appointments, and the navy and army medical services. Hospital abuse by the well-to-do is a serious matter for the profession and for the charitable public. The money meant for the poor is spent upon those in easy circumstances who are mean enough to take advantage of our gratuitous services. The only effectual way of checking this is by limiting hospital advice and treatment to those who are recommended by a medical man as suitable cases for charitable treatment. Against under payment by medical clubs and Poor-law committees we have our own remedy and in these cases as satisfactory results could be obtained as were got a few years ago in the case of the Army Medical Department. In these matters our efforts in pressing for reform should not be spasmodic. At times the pressure needs to be severe but at no time should our grasp be quite relaxed.

## THE PREVENTION OF TYPHOID FEVER IN ARMIES.[1]

By H. E. LEIGH CANNEY, M.D. LOND.,

LATE ASSISTANT DEMONSTRATOR OF PHYSIOLOGY AND CHEMISTRY, UNIVERSITY COLLEGE HOSPITAL, AND HOUSE PHYSICIAN, HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

THE diseases which prevail in armies in the field are, in overwhelming proportion, diseases of the intestinal tract—typhoid fever, dysentery, cholera, and diarrhœa. They occur with absolute precision in war and with an intensity only comparable in civil life with the state of affairs existing throughout Europe previously to 1860. Wherever armies have placed themselves, either in war or in peace, under modern sanitary methods, the same measure of success has followed as in the case of civil populations, notable instances being the British army, the German army, and, lately, the French army. British foreign stations, once rightly regarded with terror, are one by one rapidly approaching the results obtained in civil life at home. As the remedies to be proposed for the prevention of the greatest of these evils—typhoid fever—will in all probability extinguish largely the remaining diseases referred to I have limited myself to the subject of typhoid fever.

### ARMIES IN THE FIELD.

Up to the present time, with the exception of one or two minor expeditions, armies have made it a rule to take the field regardless of sanitary precautions, with uniformly disastrous results. They have exposed themselves constantly to wholesale water poisoning, to the evils of soil pollution, and to the multiplication of these evils by contagion. It has been deemed unnecessary for commanding officers to pay the slightest regard to these evils or to be acquainted with their causes and the means of their prevention. The evils have been accepted as unavoidable by both War Office and public. I believe, however, that the awakening of the press and public to their responsibilities in the matter, together with the desire of several leading War Office officials to give some attention to the question, will secure shortly to the army a scheme suitable for its protection from these evils in future.

### PUBLIC ASPECTS OF THE QUESTION OF PREVENTION.

These evils cause four-fifths of the invaliding of war, fill the hospitals, embarrass and increase the transport, reduce efficiency, and vastly increase the expense and the duration of war. It is probable that in the recent war some 100,000 men at least have been in hospital for long periods of time, a very large proportion of whom have been prevented from taking any further part in the war, and when it is remembered that each invalid at a given time requires the services of one man to provide for him, some idea may be formed of the loss of efficiency thus produced. This condition of affairs was anticipated by the War Office. At Bloemfontein the anticipations were realised. Lord Roberts telegraphed (June 6th, 1900), "I ordered that the requirements of the sick were to be first taken in hand as soon as the rail had been repaired and a few trains of supplies had been got through. ..... I impressed upon the P.M.O. and Lord Methuen who was on his way to Kroonstad to do all that was possible to remedy matters. A few days after my departure I received a report from the P.M.O. that the medical arrangements there were in all respects in good order, while Lord Methuen has since informed me that everything is thoroughly satisfactory." Everything thoroughly satisfactory! That the House of Commons could be persuaded to see in this vast preventable misery a "question only of transport," and finally, after months of discussion, to come to the conclusion that these evils were unpreventable and that the country should in future provide thousands of typhoid beds and nurses innumerable, will be a matter for wonder 20 years hence.

The Secretary of State for War said at that time: "Could the evils which they point to have been avoided by a keener foresight or by greater zeal and intelligence on the part of our officers and more especially on the part of the Royal Army Medical Corps in South Africa?" The answer to this question is that these evils could have been avoided by keener foresight, zeal, and intelligence on the part of the Commander-in-Chief when the war broke out, and by his staff.

### THE TYPHOID BACILLUS.

The typhoid bacillus is in a more marked degree than the bacillus communis or perhaps the spirillum of cholera designed for an existence in liquid media. Research has shown that the human body may probably be regarded as the natural habitat of the bacillus in its most virulent form, and that though various media, such as soil, refuse, clothing, and possibly air, afford it a temporary means of existence, it avails itself of these latter media chiefly as vehicles for its carriage to liquid media, by means of which it is enabled to obtain a wide diffusion in its human host.

There is strong reason to suppose that as regards communities, provided that the liquid avenues were strictly closed to the bacillus, the remaining avenues, or the "vehicular media," as they may be termed, would cease to be potent in maintaining the access to man open to the

[1] Abstract of a paper read before the Medical Society of London on Oct. 27th, 1902.

bacillus. Thus, in vast communities densely packed, such as London, the former heavy incidence of typhoid fever has been reduced to very small limits, in spite of the fact that the water avenues still remain open to the bacillus as has been shown recently by Dr. W. H. Corfield and Dr. L. C Parkes, and Dr. Rideal.

### THE TYPHOID BACILLUS IN SOIL.

Dr. Martin in 1899 failed to recover the typhoid bacillus from unsterilised soils kept very moist and at a high temperature (from 19° to 37° C.) after 24 hours. At a lower temperature (from 2° to 12° C.) and a drier condition of soil the bacillus was recovered up to the twelfth day. In 1900 Dr. Martin concluded that the disappearance of the typhoid bacillus was due to the antagonism of the bacteria proper to soil, which are produced in great numbers at the higher temperatures. The general conclusion was that the typhoid bacillus has commonly only a short existence in soil, that it is destroyed by the products of the putrefactive bacteria which exist in most cultivated soils.

Major R. H. Firth, R.A.M.C., and Major W. H. Horrocks, R.A.M.C., in 1901–02 by means of a new method of cultivation, succeeded in recovering the typhoid bacillus after 74 days from ordinary and sewage-polluted soils. They found that the bacillus is unable to grow in any direction in soil, that after heavy rain it disappears entirely from surface soil, that excessive moisture or great deficiency are the main factors affecting the chance of survival of the bacillus in soil, and that from drying sand and from soil dried to dust the bacillus was recovered up to the twenty-fifth day.

### FLIES.

That flies can give rise to an epidemic of typhoid fever in a camp with proper earth treatment of the excreta, even if one or two cases of typhoid fever were present, is extremely improbable unless it were done by infection of milk or large quantities of water. Without these agencies only a few sporadic cases would possibly result. I therefore prefer to consider flies as vehicles for the possible conveyance of typhoid bacilli to man, as a water avenue mainly. I am referring only to the case of clean camps. In such cases as Bloemfontein, Kroonstad, or Ladysmith, where every sanitary law was neglected, it becomes a matter of indifference whether in addition to his pint of infected water drunk several times a day for weeks whilst crowded together with the unattended typhoid fever patients a fly may have added another bacillus or two to the soldier's mouthful of food.

That typhoid fever can spread by close contact, especially the contact of nurse and patient, is generally admitted. That contact alone will account for an *epidemic* in a camp, even on a small scale, as in a tent, other than through some water avenue, is very improbable. Typhoid fever possesses only a low degree of infective power in ordinary circumstances, and it must be remembered that in 23 years at the London Fever Hospital 5988 typhoid fever patients were treated and only 17 residents contracted the disease, most of whom had no personal communication with this class of patients. Of the 17 cases 12 were after 1864 during repairs of drainage. During these 23 years no antiseptics were used and the typhoid bacillus had not at that been discovered.

### WATER AND AIR.

In my previous publications in connexion with the scheme I have proposed for supplying armies with "approved" water, so great were the difficulties in persuading the authorities to move in the matter that it was imperative to centre the subject of prevention of typhoid fever in war round the question of water, the main avenue of typhoid fever to armies. I have little to add with regard to the subsidiary avenues or vehicles of typhoid fever to armies beyond what I have already stated in the scheme published in July, 1901, where the following statements occur: "In peculiarly neglected and unsanitary surroundings, as in some armies and camps, flies may convey the bacillus, or rarely dust. Both these agencies can only act where no proper precautions are taken." And again in a paper read at Cheltenham in August, 1901, after a careful analysis of some supposed air-borne epidemics in the army in different parts of the world, I concluded: "Enteric will have to be met and overcome, in no matter what part of the world on the water-borne theory mainly, though every other avenue must also be guarded."

### AIR AS A SUPPOSED CAUSE OF SOME EPIDEMICS OF TYPHOID FEVER.

The number of epidemics traced to air in England or in Europe is extremely limited, so generally is the pollution of water the ascertained cause, whether by gross pollution, defective fittings, or by actual deep soil contamination usually through sand, as in the case of the wells of Chichester, or, as lately shown, through the filters of some of the London water companies, or by the water pollution of articles of food. Hence in the consideration of the causation of any epidemic of typhoid fever the aerial theory cannot be accepted as proved until the water avenues have been previously excluded. In armies and in Indian or South African camps, especially where the facilities for polluted water are innumerable, no instances of air-borne infection can be accepted until this has been done. In the case of the British Army in India I have shown that in all the instances where this causation was assumed the reports were inconclusive and the water avenues were left partly unprotected.

### QUETTA.

The most notable instance of this kind was the outbreak at Quetta in 1896. Here an elaborate but, as I have shown elsewhere, inconclusive, report was drawn up in favour of air-borne infection by winds across the filth trenches. The water-supply was assumed to be uncontaminated, "as perfect as possible to conceive," yet the typhoid bacillus was separated from one of the taps in 1896. There were epidemics at Quetta in 1896, 1897, and 1898. In 1899 the defects had been corrected which were the supposed cause of air infection and the incidence this year was reduced from 108 per 1000 to 10·8 per 1000. The 1898 epidemic was attributed to the dust storms of May and June, though the monthly cases were 13 times more between July and October. There was strict sanitary control. The report for 1900 states that Quetta had the largest outbreak of the year—namely, 50·7 admissions per 1000. The barracks and cantonments were "models of cleanliness." The stored boiled water was protected from dust. There was a special sanitary officer. With regard to the water-supply, some defects were discovered in some of the joints and connexions of the pipes that had been recently laid, but there was no evidence of contamination of the water-supply in consequence. No coliform organism was found in the water. Everything connected with the supply of aerated waters was said to be in excellent order, the water used for bottle-washing was "pinked." The dairies were fairly satisfactory. The butter was condemned, but was excluded as a cause. The sanitation of the native city was condemned. Major A. M. Davies, R.A.M.C., states at the conclusion of the report for 1900 "causation not at all clear, but probably the native latrines, infected soil, and then dust." It was, nevertheless, unquestionable that the bazaar drinks were infected and were continually accessible to the men, that some of the men confessed to having drunk from the foul irrigation channels and that the water-supply of the barracks (though boiled for drinking purposes) had defects in its fittings which may have made it the means of infection to some in the lavatories and through the soda-water bottles. The fact remains that though in this test case in Indian sanitation every precaution was taken against aerial infection by extreme cleanliness to exclude the action of flies and dust, yet the heaviest epidemic of the year occurred at this station.

### THE BOER CAMP IN CEYLON.

In the case of the epidemic amongst the Boer prisoners and in the regiment acting as guard in Ceylon in 1900, Major R. H. Quill, R.A.M.C., concluded in favour of air-borne convection. The drinking-water was passed through Pasteur tank filters for the Boers and through portable Pasteur or Berkefeld filters for our own men. The epidemic in our own men followed the ordinary course in Indian experience ending in December, 1900. The most elaborate precautions were taken against air-borne typhoid fever in the way of disinfection of floors, rooms, clothes, &c. The water, however, was never boiled and therefore the statement that all the water avenues for the entrance of typhoid fever were closed to the military camp cannot be accepted.

These two instances, Quetta in India and the Boer camp at Diyatalawa in Ceylon, are the only two clearly-recorded cases of supposed air-borne epidemics of typhoid fever in those regions and neither of them is conclusive, as in neither case has it been shown that the men had access only to sterile water.

### SOUTH AFRICA.

Major R. J. S. Simpson, C.M.G., R.A.M.C., after a searching inquiry into the conditions under which enteric fever at

Pietermaritzburg in Natal was causing more than half the cases of enteric fever in the British army in South Africa between the years 1884 and 1896, stated in his exhaustive report that: "The cause is common to the city and the camp; the two common causes are water and dust. But if the dust were the chief means of propagation, one would expect the prevalence greatest during the dry weather: enteric fever does not begin to prevail until after the onset of the rains, when dust is both less in quantity and frequency. On the other hand, we have enteric fever occurring amongst the native population throughout the country. The first washings of the polluted surface pass into the water supply, which is not efficiently filtered, and soon after the first onset of the rains we have enteric fever both in camp and city." At the prison where boiling and storing of water are carefully attended to and though exposed to the dust and flies of a city where so much enteric material was scattered about indiscriminately on the soil, the report states "not a single case occurred amongst 348 prisoners." Comparative immunity of the women and children was also observed, as is usual in India, they being largely protected by barrack rules which could not, however, specially protect them from enteric borne either by dust or flies.

Dr. George Turner, after six years' experience in South Africa and as medical officer of health of the Transvaal, following on an experience of 22 years as medical officer of health in England, in the *British Medical Journal* of Feb. 15th, 1902, writes on the causation and prevention of typhoid fever in South Africa. He was employed by Lord Roberts to superintend sanitary arrangements of camps, towns, and hospitals in the British occupation. After concurring in the inconclusiveness of the reports of dissemination by dust of typhoid fever in India, he continues: "The causation of epidemics of enteric in South Africa is practically similar to that which gives rise to the majority of cases in England—namely, a polluted water-supply. ..... I never had any reason to suppose enteric was attributable to either dust or flies. ..... On one occasion only—in Cape Colony in 1899—had I any grounds for supposing that dust was concerned in the production of typhoid and on that occasion the dust appeared to have acted through the agency of water used for drinking." Most of Dr. Turner's work was in association with Professor Simpson (member of the War Office Enteric Committee). He states further: "The evidence that water was the chief agent in spreading the disease was so overwhelming ..... wind-borne dust as a cause may probably be possible, I deny that it is usual or even frequent. Typhoid cases are least frequently met with just at the period during which dust storms prevail, are most numerous when, on account of heavy rain, dust is less troublesome. As regards flies I hold a similar opinion. The possibility is undeniable. Flies begin to be troublesome long before typhoid prevails and continue to annoy long after it has subsided. When once typhoid is common the flies should carry on the infection, which should continue as long or longer than the flies. ..... Emphatically, typhoid in South Africa is almost entirely due to polluted water. ..... There was ample evidence ..... that where the commanding officer 'had a fad about water'—an expression once used to me by a military man—the case incidence of typhoid was insignificant."

### EGYPT.

The British army in Egypt and the Soudan has suffered severely from enteric fever, dysentery, and simple continued fever from 1884 to recent times. Intimate acquaintance with this country during the past ten years in civil practice has afforded experience in the facts I shall bring forward.

### ASSOUAN.

Three sites in a space of five miles on the east bank of the Nile were occupied by the British troops from 1885 to 1887. Within a stone's throw of two of the sites two large English hotels are now placed and the Assouan Barrage works occupies the more southern site. In 1886 at Assouan there were 276 cases of typhoid fever among the British troops, this force being about twice as great as the average number of Europeans alone annually at work on the barrage for the past four years. The medical officer at Assouan reported as follows: "Its prevalence must, in my opinion, be chiefly owing to climatic causes and not to the insanitary condition of the water-supply." And the medical officer of the frontier field force reported that "the recommendations as to boiling and filtering were not effectually carried out, but, on the whole, I do not think defects of drainage, latrines, or water-supply were the most important factors in the spread of the disease."

In 1898 the Assouan Barrage Works were commenced and during the first two years the average strength of Europeans was 923. The camp was also occupied by an average of 5463 natives. In this vast camp during two years not a single case of typhoid fever originated locally, although it was brought nine times by fresh arrivals from Alexandria who developed it within the first 12 days. The sanitary conditions were, and still are, dry earth trenching, myriads of flies, plenty of dust and wind at times and the water protected at the intake half a mile up stream and in the distribution.

In 1886 the military epidemic was attributed to air-borne infection, and the local insanitary conditions inseparable from all camps and "defects of water-supply were not the most important factors." The total absence of enteric fever during the period from 1898 to 1900 and practical absence of dysentery originating locally during the same period is attributed to the civil sanitary scheme being formed mainly on the basis of a water-borne theory of these diseases.

In the winter of 1900–01 there were 8000 English and American visitors to Egypt and the Nile valley. In 1898 Surgeon-General (now Sir) W. Taylor, then in charge of the Nile expedition, reported of enteric fever: "The specific germs are no doubt swarming in both earth and water, considering the frequency of dust-storms when it is impossible to avoid large quantities of soil, the prevalence of the disease is not surprising." Now, few soldiers swallow more of the soil than these tourists driven at a great pace on donkeys in parties of 50 and 100 through every town and baznar on the Nile, yet only four contracted enteric fever. At Assouan itself out of some 500 visitors constantly present at the hotels, and often as many in steamers on the river bank, no case of typhoid fever has either originated or developed locally during two years. The difference between the military and civil results in Egypt is not to be explained by assuming the ubiquitous presence of the bacillus, but in the fact that the civil population takes average precautions against water-borne disease, the army in the past has not done so, at least on active service.

### THE UNITED STATES OF AMERICA VOLUNTEER CAMPS, 1898.

Only the abstract report of the Commission appointed to inquire into the vast epidemics of typhoid fever in these camps of mobilisation has yet appeared. The data are insufficient to form an opinion upon, though some conclusions arrived at and the facts leading to them appear in the abstract report. The main conclusion was that infected water was not an important factor in the spread of the typhoid fever. There were 20,738 cases amongst 107,933 men in camp. There was no provision for disinfection of excreta of the patients. With the "extremely polluted condition of the soil," uncovered latrines, the uninfected and infected living together, without care, nursing, or disinfection of infected excreta, it would be unprofitable to attempt to trace the particular avenue by which these soldiers became infected, seeing that every possible avenue was entirely unprotected.

### EFFECTS PRODUCED BY PROTECTED WATER.

Where any attempts have been made to limit the consumption of water to protected water good results have followed, if not total immunity.

### BRITISH ARMY.

In the wars of the nineteenth century there have been only three where fairly good results as regards prevention of disease were obtained. In the Abyssinian campaign (1867–68), the Suakin operations (1885), and in Ashanti (1873–74 and 1895–96) the incidence of typhoid fever and dysentery was very small. These results were obtained by serving the troops either with distilled water or boiled water served as tea and coffee, though precautions were not taken to avoid infection of this water in the Suakin campaign.

### PRISONS.

It has frequently been observed that in prisons where approved or boiled water has been alone used there has been immunity from typhoid fever. Instances of this kind have been provided by the sudden and lasting improvement at Millbank in 1854 in the midst of an epidemic of cholera and by the facts (1) that after Pentonville prison was supplied

by a well in the chalk there was no death from typhoid fever in 21 years, and (2) that during the three epidemics of cholera which have occurred since 1843 no case happened in the prison. To the Pietermaritzburg prison immunity in the midst of violent typhoid fever epidemics outside I have already referred and numerous like instances might be given.

### CONCLUSIONS.

1. That unless all the water avenues to an army or camp have been protected it cannot be assumed that the incidence of typhoid fever is due to air-borne agencies. 2. That it is not possible to affirm that the water avenues to an army are closed unless the sterilisation and distribution of the water are carried out by specially trained men. 3. That the evidence of air-borne typhoid fever is not clearly established in recorded Indian military experience. 4. That in South Africa and Egypt the evidence is opposed to this theory. 5. That the weight of evidence from India, Egypt, and South Africa is immensely in favour of the paramount importance of the water avenues, especially in the onset of epidemics, and that the spread of the disease by the subsidiary avenues, flies, dust, and contact, only becomes a factor of importance under conditions of the grossest neglect of sanitation. 5. The evidence from Egypt proves that if the water avenues are protected all other avenues are powerless to originate and to spread *epidemics* of typhoid fever in large bodies of men.

### PRACTICAL DANGER OF THE AIR-BORNE THEORY.

I have drawn attention to two instances—Quetta in India and the Boer camp in Ceylon—where every conceivable means were taken to arrest more especially the spread of air-borne typhoid fever. In each case the water avenues were not excluded entirely. The epidemics at these two places were the largest recorded in Indian experience in that year. I have shown the disastrous effect in Egypt (1886) of a similar line of action and also in the United States volunteer camp. There is, I believe, danger in diverting even the medical mind from concentrated attention upon the main avenue of typhoid fever to armies. There is greater danger in diverting the public attention from the same. To teach the public and military officers the doctrine that "infected water was not the great factor in the causation of the disease" might be, and has been, the cause of grave danger to the public and the army. Since the recent publication of the work of Major Firth and Major Horrocks Lieutenant-Colonel Porter, R.A.M.C., writing in the *British Medical Journal*, said: "I am convinced water plays a very unimportant part in the propagation of enteric fever in troops in the field in tropical and sub-tropical climates." A prominent newspaper dealing with this subject in a leading article states: "Beliefs and theories, especially in the scientific world, die hard, we know. There need, therefore, be no surprise if the supporters of the water-borne school oppose the conclusions at which Majors Firth and Horrocks have arrived." It is to be regretted that such able work should appear to the public a reason for silencing the demand for the immediate completion of a scheme for the thorough protection of the water supplied to armies or for supposing that after a man entered the army he enjoyed an immunity from the evils of polluted water which no civilian ever hoped for.

### SANITATION.

The sanitation of a camp resolves itself into certain methods and technique, with the details of which every officer must be absolutely conversant and in the carrying out of which every man must be taught the importance of rendering every possible assistance. As already stated under "Conclusions," there must be the trained man responsible for all fluids consumed by the army within or beyond the camp, including water, ice, mineral waters, milk, all uncooked vegetables or salads, and, in fixed camps, further responsible for the regulation of the gardens or dairies where such things are produced. In camps he is also responsible for the storing of such articles to prevent possible infection by flies or dust. He evidently must be a man of importance and reliability. In the lecture I gave in November, 1901, before the Royal United Service Institution I have termed him the "water section" man. All water carts, storage utensils, &c., or camp water-fittings must pass from the control of the Royal Engineers to that of the officers of units and their trained "water sections."

Equally important but quite distinct is the trained man who is in charge of the excreta of an army and of the cleanliness of the soil. On the thoroughness of this work and technique and his influence with the men depends the question as to whether infection of fluids and food for the army, or of individual soldiers directly, will take place through the vehicle of flies or of dust. I have termed him the "pioneer section" man. Both of these "section" men must be quite trustworthy and have influence with, and respect from, the men generally and should therefore be of the sergeant class. Both these men will require the assistance and authority of the non-medical officers of the regiment trained in the details of the same technique to assist and to supervise them and their work. The responsibility for the due performance of all these duties in a regiment must rest with the non-medical officers. The responsibility for the training and efficiency of all officers, of "water section" and "pioneer section" men in technique, and of the men generally, in the advantages to be gained by order and method, must rest entirely with the Royal Army Medical Corps, especially with that section of the corps consisting of special sanitary officers.

### THE "WATER SECTION."—*Active (non-combatant), 2 per cent.; in reserve, 2 per cent.*

In war all water is contaminated or must be considered so. In war on a large scale the army is responsible for the water supplied to regulars, volunteers, colonial troops, and naval detachments. At present if war broke out there is no scheme yet ready to give security to these forces. Without protected or "approved" water there can be no such thing as sanitation in an army. "Approved" water must be the only water consumed from the day of mobilisation to the day of return. Under great stress officers would "approve" unprotected water—the responsibility for such action would be a matter for inquiry in the same way as surrendering to the enemy.

### STERILISATION OF WATER.

There are three methods of sterilising water—namely, by chemical methods, by filtration, and by boiling.

*Chemical methods.*—There was the bromine method and the sulphate of soda method suggested by Dr. Parkes and Dr. Rideal. Liability to error in technique, the necessity for training each soldier individually in the same, with the uncertainty of the exclusion of all water-borne diseases, were sufficient to exclude these methods in practice at present.

*Filtration.*—Pasteur or Berkefeld filters were possible. The slowness of the delivery, the risk of working against pressure, the possibility of cracks in the candles in transport, and the elaborate precautions necessary in technique and in cleaning rendered filtration hardly suited for an army in the field.

*Sterilisation by boiling.*—This is the most rapid, safest, and most easily managed method at present known. At the first proposal of this method 16 months ago for the army in South Africa it was regarded as impossible. To boil the water four times daily for a quarter of a million of men was considered a utopian project. That such was not the case I have shown, as also that by the scheme then proposed transport would be enormously reduced, hospitals emptied, and efficiency vastly increased both in regard to the strength of the fighting line and the rapidity and freedom with which blows were struck. Two years ago the most rapid steriliser could not produce 50 pints of boiled water in less than 30 minutes, which evidently was hardly a practicable time. Later experiments have reduced this time to nine minutes. The particular apparatus which I have proposed is, I believe, far more rapid than any other suitable one. In case of emergency soup can be made at 180° F. (over 20° above the death-point of the pathogenic organisms) and cooled to the drinking point in nine minutes. This apparatus can be repaired on the battlefield. Various sterilisers are of course possible and the particular pattern is immaterial. Two important features in this apparatus are (1) that it can always serve tea and soup, &c.; and (2) that it insures the independence of small units of 100 men or so. All the fuel, meat extract, sugar, tea, &c., required for two days or more by 100 men can be very easily carried with the two sterilisers on one mule. A similar light instrument, with supplies, can be made as a sterilising water-cart to serve rapidly any and all drinks required by 500 men. In addition to two such sterilising carts per battalion reserve or stowage carts of a new design would be required to replace the extremely dangerous ones now in use.

*The fuel.*—The fuel required—petroleum—to sterilise all the drinking water for one man daily weighs three-fifths of an ounce—that is, it adds $\frac{1}{30}$th part to the total transport (22 pounds) daily necessary per man. As all fluids consumed by the men must pass through these machines it is no longer necessary to employ the eight heavy kettles now allowed per company. The machines and fuel must be used for no other purpose than to supply fluids to the army. The fuel required must be as constantly served as ammunition, and the reserved fuel required must take precedence in transport of all other transport except one day's ammunition. The transport of the "water section" must march with the regiment or unit, and the service of this section must be as rapid and smart as artillery. The more difficult the country from the point of view of transport the more urgent the need of absolute precision in the service of this section.

### WORKING OF THIS SYSTEM.

For the proper working of a system which assumes that no water will be drunk in war which is not "approved" by the "water section" it is evident that much attention to detail is necessary and that success depends upon insisting that there shall be no man in the army who is not directly interested in the scheme and in its results.

I cannot pass this point without calling attention to the able paper of Surgeon-General G. J. H. Evatt, A.M.S., in the *British Medical Journal* of April 5th, 1902, where he has clearly shown how this scheme should in detail be applied to the army. He has used the term "water discipline," and has added many valuable points in organisation which may be crystallised round ideas of "Handbook of Water-supply in the Field," "Water-supply Code for the Army," "Water Bugle-call," &c.

### THE "PIONEER SECTION."—*Active, 2 per cent.; reserve, 2 per cent., or more (all combatants).*

The difficulty of total disinfection or sterilisation of the excreta of an army in the field is considerable. Major Firth and Major Horrocks have shown that one inch of earth will prevent at least the growth of typhoid bacilli to the surface. It is probable, therefore, that with a highly trained "pioneer section" the action of flies and dust may be easily reduced to minute limits.

### SANITARY OFFICERS OF THE ROYAL ARMY MEDICAL CORPS.

Whilst all officers of the Royal Army Medical Corps must be, as at present, trained in military hygiene, in order that they may be able to advise combatant officers on the best means of applying their new knowledge and instructions to the greatest advantage, a special number of the officers of the Royal Army Medical Corps who have distinguished themselves in this branch in the army must be regarded as sanitary officers in the proportion perhaps of one to a division. Their duties would especially be: 1. The education of all officers placed under their care in the methods regarded by the sanitary department of the Royal Army Medical Corps as the best to be adopted at the time. This information they should give by printed instructions, lectures, or demonstrations in such a manner as to enable officers to qualify in this subject either on admission to the army or at subsequent examinations required for promotion. 2. Education, certification, and re-examination of the "water section" and "pioneer section" men. 3. Education of the men in the disasters and results from insanitary conditions of camps or water-supplies.

The sanitary officer's work practically ceases at the declaration of war; if his work of education has not been completed by then his presence on the battlefield can have little influence in warding off the coming disaster. If his work has been well done in time of peace success will follow his men. The responsibility now rests absolutely with the officers of units. On active service sanitary officers would be best employed in assisting general officers to carry out their duties as regards camp sites, &c., and in obtaining for such officers the special sanitary knowledge of local import. There must be a sanitary officer on the staff of every army corps ranking with the principal medical officer and on the headquarters staff of every expedition, and a chief sanitary officer of the army, who should be on the Medical Advisory Board, on the Army Board, and on the War Office Council. Sanitary officers should only deal with questions of preventive medicine.

### THE ROYAL ARMY MEDICAL CORPS

The attention of the officers of the Royal Army Medical Corps generally in this scheme should be concentrated upon the recognition and immediate isolation of cases of dysentery, typhoid fever, and cholera. All cases of diarrhœa should be treated immediately and if not rapidly arrested they should be isolated. The excreta of all intestinal cases, however slight, must be sterilised, as should those of cases of headache with rise of temperature from no assigned cause. The sterilisation of the clothing, bedding, &c., of all these cases is easy and must be systematically undertaken.

What likelihood is there of the adoption of this far-reaching scheme? Two years ago it was suggested in outline. It July, 1901, the scheme practically as it now stands was published. A subsequent modification in organisation was made in November, 1901, in my lecture before the Royal United Service Institution, the idea of a "Royal Water Corps" being abandoned in favour of the present organisation placing the trained "water" and "pioneer" sections immediately under the officers of all units, a plan which Major Firth and other authorities thought far more likely of success if it could be carried out. On August 17th, 1901, Lord Stanley in the House of Commons replying to Sir Michael Foster, stated that the scheme was "entirely impracticable for active service." At the meeting of the Royal United Service Institution a practically unanimous feeling was expressed in favour both of practicability and effectiveness, an opinion which the leading military papers indorsed.

By courteous permission of the Secretary of State for War the difficulties in the way of the scheme were explained to me at that time and appeared to me to be inconsiderable. I therefore wrote to the Secretary of State for War to the effect that I should continue to urge this scheme and explained that unless the precautions suggested were undertaken nothing could save the army from some epidemic (January to April last). On May 6th, 1902, in the House of Commons, in reply to Sir Walter Foster, Mr. Brodrick stated: "The principal medical officer reports that the enteric cases mostly come from the columns. ..... In the camps and stationary garrisons steps have been taken to have the water boiled and special officers selected to deal with the sanitary work of the district and the outbreak of disease. For mobile columns a scheme for providing safe water to fill the soldiers' water-bottles at all times has been prepared and measures are being taken to carry this out." The principal medical officer for South Africa (Surgeon-General Sir William D. Wilson) reaffirmed this at Plymouth in September last. He stated: "Last year I recommended in South Africa that wherever there was a stationary body of men means should be taken for boiling the water, and in that way enteric was stamped out. ..... The columns while on the march were unable to boil their drinking water." In the very places—the fixed camps—where typhoid fever was expected to be most severe there was immunity; the mobile columns in which enteric fever was feared less were left unprotected, hence the typhoid fever was "mostly from the columns." This is conclusive. Mr. Brodrick continued: "Officers had been specially instructed as regards the necessity of preventing the men from drinking the water from unsafe sources, but it is not too much to say that no instructions will prevent thirsty men committing such indiscretion." That this advice to the mobile columns took effect is probably the case, as a correspondent at Cape Town for a London paper writes on July 9th. "Ever and anon fresh troops are arriving at the railway station from the north. ..... Jam tins suspended on strings rattle about each man's hips; they have been useful for boiling small quantities of water"—the embryonic attempt of the patient Tommy to institute his own "water section," or was it perhaps an instance of the survival of the fittest? On July 31st, 1902, in reply to Sir Michael Foster, the Secretary of State for War stated that experiments on sterilisation of water were in progress, but that the scheme had not yet been sufficiently tested to justify its establishment on a permanent basis.

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## REFLEXES: THEIR RELATION TO DIAGNOSIS IN RHEUMATOID ARTHRITIS.

BY R. LLEWELYN JONES, M.B. LOND., M.R.C.S. ENG., L.R.C.P. LOND.,
LATE RESIDENT MEDICAL OFFICER, ROYAL MINERAL WATER HOSPITAL, BATH.

THAT there is an increase of myotatic irritability in rheumatoid arthritis was pointed out some years since by Dr. Garrod. This observer found the reflexes exaggerated in

37 out of 50 cases examined. Dr. Bannatyne says: "The reflexes vary in different cases, but in a case of pure rheumatoid arthritis they are usually slightly increased." The latter observer noted the occasional absence of reflexes. He ascribed their exaggeration as due to an irritative lesion and postulated the existence of a neuritis to explain their occasional absence. Dr. J. K. Spender, in considering the reflexes in his article on Rheumatoid Arthritis in Allbutt's "System," says: "It must be confessed that it is difficult to reconcile all the phenomena on the hypothesis of a spinal lesion." He maintains that "generally there is a distinct increase in myotatic irritability." It seemed to me that some light might be thrown on the subject by the study of the reactions in asymmetrical types of the disease, and by this is meant the comparison of the reflexes in a limb already the seat of arthrodial trouble with its unaffected fellow. If this plan be followed it will then be found that the deep reflexes on the diseased side are much more brisk than on the other. The superficial reflexes, on the other hand, show less uniformity in their behaviour. They may be very exaggerated or very sluggish. The scapular reflex, for instance, may on stroking the skin respond vigorously or the reverse, but the tendon reflexes—i.e., biceps, triceps, &c.—are always accentuated.

In reviewing the tendon reflexes in the upper limb I have noticed a striking correlation to exist between the diseased joints and certain reflexes. Thus supposing the joints of the ring and middle fingers alone to be these at of fusiform enlargement, the flexor tendons at the wrist will exhibit a more vigorous response to tendon tapping than the extensors. If, on the other hand, the index and thumb be the affected digits then the extensor reactions are the more prominent. If, as is too often the case, the two groups of digits are affected the tonicity of both sets of muscles rises, and being deprived thereby of the power of contrasting the tonicity of different groups of muscles in the diseased limb we can only compare its increased reflexes as a whole with those of its unaffected fellow. Supposing one of the lower extremities to be the seat of joint trouble we find the tendon reflexes on the diseased side the more brisk of the two. The superficial reflexes—gluteal, plantar, and cremasteric—are either exaggerated or sluggish. The knee jerk is exaggerated on the diseased side, and it is important to note that this increase may occur before the knee-joint is apparently affected.

The uniform increase in the deep reflexes sharply contrasts itself with the variability of the superficial, and in an attempt at explanation I can only state that although when disease is confined to the knee-joint the plantar reflex is usually of high grade, on the other hand sluggishness of the plantar reflex only occurs when the ankle-joint is either coincidently or independently the seat of disease. Again, usually in these cases there are coldness and blueness of the feet with profuse plantar sweating, and the joint mischief is actively progressive. On the other hand, should many months intervene between the affection of the knee and ankle, the mischief in the latter joint may have undergone a partial or complete resolution, the swelling and pain and plantar sweating, &c., have disappeared, and the skin, unnaturally dry and harsh in many of these chronic forms, responds vigorously to tickling. The exaggeration of the plantar reflexes when present may reach a high grade and in some cases shows a tendency to spread to the opposite limb, whose tensor vaginæ femoris will be seen to contract vigorously, but I was not able to evoke a bilateral reflex by stimulating the sole of an unaffected limb. I have in a few cases seen a definite extensor reaction in response to plantar stimulation (Babinski's sign).

As a result of the examination of a large number of cases I have observed a striking harmony between the gluteal and plantar reactions. If the plantar be sluggish the gluteal reaction on the same side is likewise, and the reverse holds good, while the opposite and unaffected limb gives normal reactions. This sympathy existent between the gluteal and plantar reflexes occurs independently of any disease in the hip-joint, and I have always found it even when the disease was confined to the ankle-joint. The cremasteric seems as a rule to be exaggerated and the difference in the two sides is strikingly marked.

In cases where the plantar reflex is sluggish on one side it will always be found that the skin of that sole is relatively more sensitive to pain than its fellow. There would seem to be a decrease in common sensation and a rise in pain sensation, and furthermore, the skin of the buttock on the same side is more hyperalgesic than its fellow, and also the skin over the upper and outer portion of the thigh. This disparity of the limbs as regards sensation to pain persists even in symmetrical cases where both plantar reflexes are sluggish, and it would appear to bear some relation to the duration of the disease, inasmuch as the sensory areas above noted are always relatively more hyperalgesic in that limb which has been longest the seat of joint lesions.

The knee-jerks are often increased to a degree compatible with sclerosis. They may be clonic and the same high grade may be reached by the tendon reflexes in the upper limb. Ankle clonus is fairly common and its presence in one limb and its absence in its fellow often constitute a striking phenomenon in asymmetrical cases. It often starts when the foot touches the ground. Moreover, I have seen a well-marked ankle clonus appear suddenly when the patient was lying quiet in bed, the leg extended, and no pressure on the sole. Others have complained of its occurrence. It apparently is quite painless. In one case, where both the lower limbs were the seat of joint affection, well marked ankle clonus was present in the limb longest affected, while in the other the clonic movements were confined to the toes. In another case, that of a youth whose right leg was affected, ankle clonus was easily educed by raising the thigh off the bed, no pressure on the sole being needed. It might be thought that such grave departures from the normal as ankle clonus would only be found in cases of long standing, but such is not my experience. I have seen it when the disease was only of a few months' duration, but I believe I am on the side of truth when I state that it is a symptom not common save in the more acute forms of the disease—possibly dependent on the variety of infection.

We have hitherto confined our study of the reflexes to asymmetrical cases. When, however, we come to the consideration of cases in which both limbs are affected, or possibly all four extremities, the clinical path is beset with difficulties. For example, should both lower limbs be attacked by arthrodial mischief in quick sequence the quick rise in myotatic irritability deprives us of the power of comparison. The superficial reflexes, as before stated, may be either sluggish or exaggerated, but, uniformly as they may behave on tickling or stroking, I have always found the relatively higher sensitivity to painful sensation on the side of the first affected limb. In this connexion it may not be out of place if I state that in my experience the joints of one limb are never affected simultaneously with those of the opposite limb. Usually an interval of days, more commonly weeks or months, intervenes, but the area of distribution of disease in the opposite limb is, whenever it occurs, symmetrical, and this tendency to seriality in time in the affection of limbs may account for the disparity in pain sensation.

The difference in the reflexes in asymmetrical cases has been in many cases so marked as to suggest to my mind the possibility of an initial decrease, but I do not think that this is the case, as I have in several patients seen the tendon reflexes in the upper limb notably increased when the disease in an acute form was limited to the lower extremities, and it does not seem unreasonable to suppose that such may be the case, for, if we own allegiance to the theory that infection plays a part in the etiology of many of these cases, is it not probable that the delicate reflex mechanisms will respond to slighter degrees of toxæmia than are sufficient to evoke the graver trophic phenomena? And in support of this how often do we find that vague nerve symptoms were complained of long before joint trouble manifested itself—i.e., tingling and numbness of the fingers and tenderness of the finger tips. I remember cases in which the first symptom of the joint affection was a condition of local syncope in one finger. And in the muscular system how frequently do patients complain of weakness of grasp, stiffness of muscles, and this of no mild grade either. I have known the first symptom to be a tonic contraction of the flexors of the wrist and fingers which lasted for some hours and recurred repeatedly.

Granted that this be the case, we should expect, on the other hand, to find a corresponding wane in myotatic irritability in those unhappily few cases in which complete recovery from the fusiform stage occurs, and this we find to be so, and this seems to me to endow the symptom with some prognostic and diagnostic value. The increase in myotatic irritability is one of the earliest features to appear in the clinical picture. It is one of the last to fade away. It maintains its high grade long after the joint troubles are

seemingly quiescent and I am sure that any unusual persistence at a high level is significant of an imperfect convalescence and the possibility of a fresh outbreak is not remote. On the other hand, diminution is of good omen. It is this harmony between the reflex reactions and the varying joint conditions that makes the study of these reactions so complex.

The correlated behaviour of the gluteal and plantar reflexes is also worthy of more than passing notice. Taken by themselves I may seem to attach too much importance to them, but when one takes into account that even when the disease is confined to one ankle-joint the glutei muscles on the same side exhibit in the earlier stages fibrillary tremors and, what is more important, a marked atrophy in these same muscles occurs later, it seems to me a clinical fact of great significance. The difference between the size of the two buttocks is very marked even when the disease in the ankle is not so bad as to prevent the patient walking. No disease in the hip-joint is necessary. In any given case with rheumatoid affection of one ankle it is important to note carefully the reflexes, both deep and superficial, in both limbs, to ascertain if any correlation exists between the gluteal and plantar, and to observe the condition of the gluteal muscles. Those whose lot it is to treat many of these unhappy sufferers realise only too painfully that it is in the day of small things that treatment is of much avail. The frequency with which early rheumatoid disease in the ankle-joint is mistaken for a mere sprain, taken into consideration with the lamentable, far-reaching, and ofttimes irremediable consequences of such a misconception, urgently calls for an early recognition of the true nature of the malady if we would succeed in checking its course.

Head, whose work on spinal distribution has done so much to unravel the hidden secrets of neurology, has shown us that the plantar and gluteal reflexes own allegiance to the same segments of the spinal cord, and when we bear in mind the fact that the nutrition of the glutei, peronei, extensors of the foot, and intrinsic foot muscles depends upon the maintenance of the integrity of the same segments (first and second sacral) we seem to gather fresh light as to the possible etiology of the flat foot so common in rheumatoid arthritis. Puffiness of the synovial sheaths of the peronei and extensor tendons is a very prominent and early symptom in these cases. If we wish for further proof we find it in the alterations in the sensory areas supplied by the same segment—i.e., hyperæsthesia and especially hyperalgesia along the back of the thigh. Again, in the upper limb, the same error arises as regards trouble in the wrist-joint, and here I would emphasise the importance of careful examination of the reflexes, deep and superficial. Even when trouble is confined to one wrist-joint the scapular and even palmar reflex of that side will be found more brisk, and, furthermore, this detailed examination often reveals marked wasting in the shoulder muscles of the same side, more particularly the supra- and infra-spinati.

No remarks on the tendon reflexes in rheumatoid arthritis are complete unless we mention the fact that they are occasionally extinguished. This is an extremely rare occurrence —I have only met with one in the course of over 100 cases. In this case, which occurred in a young female, the quadriceps extensor cruris gave the complete reaction of degeneration. The contractions of the adductors and hamstrings were extremely sluggish, reacting only to currents of painful strength. The tensor vaginæ femoris alone gave normal reaction, responding vigorously to direct electrical stimulation and also when the sole was tickled. The case had been a very acute one; all the limbs were affected and the patient had been bedridden for over a twelvemonth. The fact that the presence of joint lesions in the limbs determines so great a change in the reflexes would lead us, considering the frequency with which the jaw is attacked in rheumatoid arthritis, to expect alteration in the jaw-jerk. Where the joint has been affected it is very brisk and I have seen clonus.

Turning to the abdominal reflexes, I can only state that in cases where the disease has appeared first in the arm and leg of one side the reflexes, epigastric, &c., on that side were brisker than on the other. In the visceral reflex mechanisms one rarely finds any appreciable change. In two children, aged nine and seven years respectively, with marked rheumatoid arthritis, there were in both incontinence of urine and in one incontinence of fæces, which symptoms had come on since the onset of the disease. In women it is not uncommon to hear complaints of increased frequency and difficulty in beginning the act of micturition. I had a case some time since in which there was almost retention. This woman—not, I believe, hysterical—seemed able to empty her bladder only when it reached undue distension. For days she only micturated once in the 24 hours, notwithstanding frequent attempts. Constipation is a marked symptom in many cases. Dr. Spender, in his article on Rheumatoid Arthritis in Allbutt's "System of Medicine," points out that in the final stages of rheumatoid arthritis bulbar symptoms are sometimes found and he describes cases in which the act of deglutition was impaired. I myself have seen two cases in which deglutition was impaired. The obstruction seemed of a spasmodic nature. The larynx is sometimes affected. I have known loss of voice to ensue in more than one instance. I have at present a patient in whom the voice has undergone steady diminution in volume. This same observer stated that the cardiac and respiratory nerves became involved and he attributes death to their paralysis.

That grave affection of the muscles subserving respiration does occur in rheumatoid arthritis I feel sure. Some two months since I saw a patient in the final stage—a young woman—whose joints were extensively diseased. Her emaciation was extreme. The intercostal and extraordinary muscles of respiration were markedly atrophied. She complained some three days before her death of cough and difficulty of breathing. On examination there was some congestion of both bases with diffuse sibilant rhonchi. On the second day her breathing became very rapid; her pulse was 140 and running in character. The dyspnœa was most painful and it was easy to see that the atrophied muscles played a large share in its production. Her temperature was 103° F. Uncontrollable diarrhœa was present. The following day the symptoms were more marked. Death occurred suddenly, consciousness being retained to the end. I did not obtain a necropsy, so that any theories as to the causation are purely speculative, but there seemed some reason to suppose that it approximated to the bulbar cases cited by Dr. Spender.

Changes from normal also occur in the eye reflexes, chiefly in the direction of diminished light reflex. It may be lost. On the other hand, the reaction to accommodation is retained. I have known loss of the power of accommodation in more than one instance. Asthenopia is common. When we consider the frequency with which rheumatoid arthritis occurs as a sequel to "sore-throat" these eye symptoms, in the light of the well-known eye symptoms found after diphtheria, form food for thought. I have no bacteriological evidence on this point, but is it not possible that in an organism predisposed to break down along certain lines—i.e., the arthritic diatheses—the nerves governing joint nutrition may also be involved with those governing the muscles? In reviewing the clinical phenomena here noted one cannot help thinking that the disease owes many of its clinical features to some disorder of the central nervous axis.

The evidence in favour of the infective theory is strong; on the other hand, proof of any change in the spinal cord is still wanting. The fact that blood and synovial fluid are easy of access, while post-mortem examinations are very rarely obtainable in the early stages of the disease, may account for the prominence of the infective theory. As regards the infective theory I do not believe that specificity can be claimed for any one particular microbe. I believe that given any source of auto-intoxication the resulting toxæmia may through its action in the cord segments produce what is called rheumatoid arthritis. Imperfect convalescence after many diseases, some of them avowedly infective, often provides the soil on which rheumatoid arthritis is nurtured. Dr. Bannatyne ascribes the disease to a toxæmia affecting the anterior cornua of the cord. I do not believe that the disease is confined to that portion of the spinal segments. In Osler's Text-book I note that in his article on Arthritis Deformans he mentions that Triboulet and Thomas have reported from Déjerine's service a case of a woman with chronic arthritis in whom the necropsy disclosed a sclerosis of the posterior columns of the cord in the dorsal region and of the columns of Goll in the cervical region, with degeneration of the posterior roots. Dr. Bannatyne invokes the aid of a neuritis to explain those cases in which there is extinction of knee-jerks. I believe that in such cases it is primarily due to disease of the spinal segment subserving the reflex

mechanism and that the interruption in the reflex occurs at that site.

In support of my belief in the segmental distribution in the cord I have before mentioned the correlation of the gluteal and plantar reflexes, and in addition I have drawn attention to the frequency with which flat foot occurred in rheumatoid arthritis and commented on the fact that those muscles which play a prominent part in the maintenance of the arch—i.e., peronei, anterior tibial muscles and intrinsic muscles of the foot—are, according to Head, governed by the same segments (first and second sacral). In addition these same segments govern the nutrition of the glutei and are responsible for the sensory innervation of the skin over the sole of the foot, the back of the thigh, and the popliteal region. We thus find that this group of changes, occurring as they do simultaneously, suggest that a lowered functional activity in the first and second sacral segments, the result probably of some toxæmia, does occur. This hypothesis may possibly explain also the profuse plantar sweating, inasmuch as the first sacral segment is partially concerned in the control of the sweat glands of the feet. In the arm I have alluded to the grouping of the fingers—i.e., the middle and the ring, the index and the thumb—and in addition may I mention the isolated affection of the little finger? This grouping and the gluteal atrophy were the first clinical signs that suggested to me the possible segmental nature of the malady. Head has pointed out that the ring and middle fingers, with a portion of the little finger, depend upon the eighth cervical segment for their sensory innervation, and the same segment supplies the flexor muscles of the wrist and digits. I have drawn attention to the increased tonicity of the flexors in these cases, and in addition I have found sensory changes in the mid-line of the forearm and hand, chiefly in the direction of hyperalgesia, but there are notable exceptions in the direction of diminished sensation. I have also seen localised sweatings on this area—i.e., on the skin of the mid-line of the forearm—and in addition palmar sweating, but I have known more than one case where it was confined to the arm area and the palm was dry. Additional evidence is found in the marked tendency to flexor cramps in cases when the disease was confined to these digits and the frequency with which these digits, compared with others, are permanently flexed in later stages. In the case of the thumb and index finger grouping the extensor muscles rise in tonus. These fingers owe sensory innervation to the seventh cervical segment. This segment also supplies the triceps and extensors of the wrist and shares with the sixth cervical the sensory area of the pre-axial border of the hand and arm. This area is one of the commonest sites of pain in rheumatoid arthritis, and objective sensory changes such as those above noted are to be found. Atrophy of the extensors was long ago pointed out, but in cases of the first group the flexors enjoy no immunity, and when the groups are combined atrophy is general.

To discuss in detail the changes in the whole arm would unduly lengthen the present article. I would only mention the fact that in cases of the index and thumb type the superior and inferior radio-ulnar articulations are simultaneously attacked and supination of the forearm is early limited in range and this limitation may occur long before flexion of the wrist- and elbow-joints becomes painful or restricted. This coincidence, I venture to think, finds its explanation in the implication of the sixth cervical segment, as these changes are accompanied by severe spasm, lasting with slight remissions for days, of the muscles supplied by this segment—i.e., pronators, &c.; and ultimately fixation in pronation of the forearm results.

In conclusion of this present article may I state that I think there is an undue tendency to centralise all the disease in the joints, to the unfair exclusion of the muscular and sensory systems? I am convinced that this is wrong. The joint troubles are the most obvious and this may account for the disproportionate amount of attention which they have received. Increased myotatic irritability is not the only symptom pointing to affection of the muscular system. In the wrist- and ankle-joints I have often noticed that the swelling in the early stages does not conform to that produced by intra-articular effusion but tends rather to assume the indefinite contour of a tenosynovitis and, though at this stage movement of the joint is necessarily limited, it does not betray within the limits of that range any indication of loss of smoothness. The appearance of changes in the muscular and sensory realms at an early stage in the life history of rheumatoid arthritis merits more careful attention, as it needs little experience to demonstrate how tedious and discouraging is treatment once the graver trophic phenomena have manifested themselves. These conclusions have been based on an examination of over 100 cases of rheumatoid arthritis, the vast majority of which have been in the fusiform stage. I would record my grateful thanks to the honorary staff of the hospital for their great and uniform kindness in permitting me to use their clinical material.

Bath.

## OPERATION FOR CHRONIC ULCER OF THE STOMACH.

BY C. W. MANSELL MOULLIN, M.D. OXON., F.R.C.S. ENG.,

SENIOR SURGEON AND LECTURER ON SURGERY AT THE LONDON HOSPITAL; EXAMINER IN SURGERY AT THE UNIVERSITY OF CAMBRIDGE.

IT is no exaggeration to say that a patient who suffers from an ulcer of the stomach that has become chronic is hardly ever cured in the full sense of the term. The longer such an ulcer lasts and the older it becomes the less is the chance of healing and the greater is the liability to complications which, if not fatal of themselves, only too often succeed in rendering life a burden. Excision of such an ulcer, so long as it is confined to the mucous membrane and does not greatly involve the sero-muscular coat, is comparatively simple. There is no reason why the operation should be followed by a higher rate of mortality than that which follows interval operations for inflammation of the appendix, while it offers as certain a prospect of cure. The same operation, when performed after these complications have set in, or because of these complications, may easily become one of the most difficult and dangerous in surgery, and not infrequently has had to be abandoned. If one thorough trial of ordinary measures has been made, and it has not succeeded, it is better that an operation should be performed without further delay than that the old measures already discredited by failure should be tried over and over again, each time in less favourable circumstances, until at last a condition is reached that no longer admits of cure.

The causes that prevent a chronic ulcer of the stomach from healing are entirely local. The wound left by its removal heals at once. I have operated upon five uncomplicated cases, three by excision and two by ligature of the whole thickness of the wall of the stomach, and in each repair was rapid and complete as it could be. In none of them did the ulcer show the slightest sign of healing. In two it was still confined to the mucous and submucous layers. In the other three it had already involved the sero-muscular coat. There were no granulations upon any of them. The edges and base were hard and dense; and beyond all doubt had they been left the hardness and the dense cicatricial infiltration around would have continued to spread wider and deeper, until at length that condition, so well illustrated in our museums, would have been reached when anything like cure is impossible and palliative measures are scarcely more practicable. Persistent irritation of the surface of the sore and the dense, almost cartilaginous, infiltration of the base and edges which results from that irritation are the causes which prevent a chronic ulcer from healing. They are purely local. The longer they are allowed to act the more powerful they become. Until they are removed the ulcer cannot heal. The wound made when they are removed heals at once.

The complications that set in are wholly and entirely the result of leaving these local causes to continue their work. They are the result of trying over and over again a method of treatment that has already failed under more favourable conditions and is morally certain to fail again. Perforation and general septic peritonitis, subphrenic and perigastric abscesses, ulceration extending into the liver or the pancreas, perigastric adhesions to surrounding organs, hour-glass contraction of the stomach, pyloric stenosis (in a very large proportion of instances), hæmorrhage from ulceration of the walls of the coronary or splenic arteries or even of the aorta, and cancer are some of these consequences. All of them might be prevented by timely operation. Hæmorrhage alone, as Dr. R. C. B. Wall's statistics show, is responsible for the death of

6 per cent. of the women and 12½ per cent. of the men over 30 years of age admitted into the London Hospital for hæmatemesis from ulcer of the stomach. Cancer, according to Hauser, follows in 6 per cent. Pyloric stenosis, according to Gerhardt and Warren, occurs in at least 10 per cent. What may be the proportion in which other complications occur, so far as I know, has never been worked out, but few of those who have once had a chronic ulcer escape altogether, and fewer still remain exempt from pain and chronic dyspepsia even when their position in life is such as to enable them to take every care.

The operation, so long as the case is still uncomplicated, presents no serious difficulty. The risk of the ulcer being overlooked, if the stomach is carefully and systematically examined in the way I have already described,[1] is exceedingly small. Even if the diagnosis proved incorrect and there was no ulcer present, but merely chronic gastritis, there would be no cause to regret the operation. Gastritis that obstinately resists all ordinary remedies and continues with such persistence as to be mistaken for chronic ulcer is best treated by performing gastro-enterostomy and by giving the stomach a prolonged period of rest without reducing the patient's strength by starvation. The mode of dealing with the ulcer presents no difficulty. It may be excised or ligatured according to its depth and its extent. The wall of the stomach from its strength and thickness is even better adapted to suturing than the wall of the intestine. Difficulty only occurs when, owing to the length of time the ulcer has been allowed to continue, it has reached such a size, or such a depth, or has caused such dense adhesions to be formed to other organs, that simple excision or ligature is no longer practicable.

Taking acute and chronic cases together I have excised or ligatured in various ways an ulcer of the stomach in 13 instances, not reckoning those in which perforation had occurred. (These have all been published.) In many of them the loss of blood had already been extreme. In six transfusion had to be performed on the table or immediately after. Two of these patients, both of whom were in an absolutely desperate condition at the time of the operation, died; the rest recovered without a bad symptom and were cured. I cannot help thinking that if these two had been operated upon before they had lost so much blood they would have stood as good a chance of recovery as the others, and I feel convinced that if only ulcers of the stomach were operated upon as soon as it was recognised that they had become chronic there would be many fewer deaths from hæmatemesis and perforation and that such troubles as pyloric stenosis, hour-glass contraction, pain and dyspepsia from adhesions, perigastric and subphrenic abscesses, dilatation of the stomach, *et hoc genus omne*, would become far more rare than they are now.

Wimpole-street, W.

## CONGENITAL HYPERTROPHIC STENOSIS OF THE PYLORUS.

BY CLIVE RIVIERE, M.D. LOND., M.R.C.P.,

ASSISTANT PHYSICIAN, EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL; CASUALTY PHYSICIAN, ST. BARTHOLOMEW'S HOSPITAL.

BUT a short while ago congenital hypertrophic stenosis of the pylorus was regarded by everyone as a very rare condition and those who had seen cases considered themselves not a little fortunate and exhibited their wares with some satisfaction to their less favoured brethren. Now all is changed—the pendulum has swung the other way and we are told that the condition is by no means uncommon. At a meeting of the Royal Medical and Chirurgical Society held on Dec. 9th a paper dealing with this disease was read by Dr. E. Cautley and Mr. C. T. Dent,[2] and in the discussion which followed many speakers expressed this opinion of its prevalence, one member having seen no less than nine cases within the past five months.[3]

[1] THE LANCET, Oct. 20th, 1900, p. 1125.
[2] THE LANCET, Dec. 20th, 1902, p. 1679.
[3] THE LANCET, Dec. 20th, 1902, p. 1682.

Now, either the condition is rare or it is not rare, it cannot be both, and if the matter is observed more closely we find that those who consider it more common speak from clinical experience of living patients, and it is noteworthy that these observers also consider the condition less fatal than has been hitherto held. To the morbid anatomist, on the other hand, it still remains, as heretofore, a rare disease. This means either one or other of two things. Either the clinician is wrong in his diagnosis and mistakes cases of spasm arising from other causes for this condition, or the condition really is less fatal than was originally supposed and may often be recovered from without surgical assistance. May I urge the former explanation as the more likely?

In support of the latter explanation Dr. H. Ashby at the meeting of the Royal Medical and Chirurgical Society already mentioned, suggested that many vomiting marasmic infants met with are really instances of the disease, and this suggestion would probably be readily accepted by those who consider the condition one of not uncommon occurrence. If this were so, surely we should have some evidence of the fact. Seeing how readily all forms of gastro-enteric disturbance in the early weeks of life, especially among the poorer classes, lead on to a marasmus of fatal issue, and seeing, as a consequence of this, what an enormous number of such cases are examined post mortem in the London hospitals every year, surely, if the condition were anything but rare, cases would more often be met with accidentally on the post-mortem table. As a matter of fact, this occurs but seldom. The recorded cases of true congenital hypertrophic stenosis of the pylorus take little time to number, but there is another condition which occurs in certain cases and which may perhaps cause similar symptoms and lead to errors of diagnosis during life—namely, a simple hypertrophy of the pyloric muscle, probably produced after birth as a result of spasm. I have performed post-mortem examinations on two cases, at any rate, in which there was noticeable hypertrophy of the pyloric ring, and the condition occurred in marasmic infants dying with symptoms presenting some resemblance to those occurring in the more serious condition. Whether the hypertrophy in these cases was due to pyloric spasm and whether the symptoms depended on the pyloric hypertrophy must remain for the present a matter of speculation. Mr. Harold J. Stiles, at the meeting of the Royal Medical and Chirurgical Society above referred to, showed that great variety may occur in the amount of muscle present in the sphincter. This he regarded as accidental, but was he right? I am inclined to think that an increase of muscle may be due to spasm and when marked (as in the two cases mentioned above) may be associated with symptoms resembling those present in congenital stenosis. If this is so it is probable that the condition will be found more often if sought for.

How very different, indeed, is the appearance of the pylorus in these two conditions (and this is the point which I wish to emphasise here)—in the acquired variety a ring of muscle triangular in cross section, a mere exaggeration of the normal pyloric ring; in the congenital condition a long, firm cylinder. This difference in appearance is so striking that it seems to me to constitute in itself a point in favour of the origin of congenital hypertrophic stenosis as a developmental error, a primary hyperplasia, as opposed to its origin in ante-natal spasm, a theory upheld by many. In all the cases which I have seen recorded the pylorus is described as a sausage-like swelling fully one inch long, and the similarity of the descriptions is striking. No intermediate forms seem to occur; the condition is much the same in all.

Now is this a condition which is likely to be caused by spasm—not a mere hypertrophy of the existing ring but a pylorus deformed as a whole, a condition strikingly different from a hypertrophy occurring after birth (providing the cases I have mentioned above were such)? In answer to this it may be argued that its ante-natal origin may account for this difference, but this does not seem to me to be sufficient. Hypertrophy of the heart muscle in cases of congenital morbus cordis does not, so far as I am aware, present any marked difference from hypertrophy occurring after birth to compensate acquired lesions, and here we have the same cause at work—namely, increased function—as in the presumed pyloric spasm.

In most of the recorded cases of congenital hypertrophic stenosis of the pylorus the neighbouring parts, stomach,

duodenum, and œsophagus, or parts of these, have shared in the hyperplasia. This has generally been regarded as a secondary change depending on the pyloric stenosis, but it seems to me more likely that this is also part of the same developmental anomaly, especially since this change appears to be sometimes partial, involving only part of the stomach in some cases. In my own case, recorded below, the whole stomach and the lower end of the œsophagus shared in the enlargement and the overgrowth seemed to me to involve all the tissues and not the muscle alone.

There are two other conditions which closely resemble that under discussion—namely, congenital hypertrophy (or hyperplasia) of the colon and congenital hypertrophy (or hyperplasia) of the urinary bladder with hydronephrosis and dilated ureters. In neither of these conditions has any obstruction been found which could give rise to a secondary hypertrophy and this fact also seems to me a point in favour of a primary developmental error in all three. Whether, if this hypothesis be correct, the parts were laid down on a too large scale from the beginning or whether the overgrowth was brought about at a later stage of development by disordered trophic influence is a justifiable speculation, but one which does not lead us any nearer to an understanding of the condition.

Whatever the causation of the disease may be and whatever views may be held as to the frequency of its occurrence, its post-mortem appearances are sufficiently interesting and sufficiently rare to make the following case worthy of publication. It occurred at the East London Hospital for Children under the care of Dr. Eustace Smith, to whom I am indebted for permission to publish the notes.

The patient, a male infant, aged three weeks, was admitted into the hospital on June 1st, 1901. He was a healthy child, was born at full time, and had been quite well till he was two weeks old. Since then he had passed no motion and very little urine. He was the only child, and the father and mother were healthy. On admission he was a small, wasted child; the face was pinched, the skin was wrinkled, and he looked ill. The abdomen appeared to be natural. For a few days after admission the child passed little urine, but this increased later. The temperature was high for the first four days, there was vomiting from four to six times daily, and the bowels were opened twice daily. After this the temperature remained normal till June 27th, the vomiting was generally once or twice daily, but the diarrhœa increased from four to eight times daily. On the 27th the temperature rose again, fluctuating between 102° F. and normal. On July 5th it was noted that the respirations were rapid and there were found impaired resonance and diminished breath sounds at the right base behind. On the 12th a pustular skin eruption began to appear and continued till death which occurred on the 26th. During the last three weeks the vomiting was much less frequent, once or twice daily, sometimes missing three or four days, and the bowels were opened about thrice daily. The child's weight on June 4th was 5 pounds 6 ounces, on the 13th it was 5 pounds 4 ounces, on the 22nd 5 pounds, on the 29th 5 pounds 4 ounces, on July 13th 5 pounds 5 ounces, and on the 23rd (three days before death) 5 pounds. During the interval when he gained in weight he was having one drachm of plasmon added to each feed. This seemed to cause diarrhœa but the weight increased notwithstanding. The child was nearly three months old at the time of his death.

*Necropsy.*—At the post-mortem examination the body was found to be emaciated. There was an abscess over the middle of the left parietal bone with some pericranial thickening. The thoracic viscera were quite natural. The œsophagus showed thickening of its walls in the lower part. The stomach was large and elongated in shape. Its wall was greatly thickened, being one-twentieth of an inch thick at the middle of the greater curvature and one-tenth of an inch at the pyloric end. The pylorus was represented by a cylinder one inch long, its circumference internally being three-quarters of an inch (measured across after section). All the coats appeared to be thickened; the mucous membrane was one-twentieth of an inch thick and thrown into folds, and the other coats together were three-twentieths of an inch. The end bulged into the duodenum with a convex surface, giving the appearance of a cervix uteri. The intestines were natural. The colon contained some altered bile but no fæcal matter. All the other organs were quite natural.

Devonshire-street, W.

# A Mirror
OF
# HOSPITAL PRACTICE,
## BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## BIRMINGHAM GENERAL HOSPITAL.

### A CASE OF GENERALISED NEURO FIBROMATOSIS (VON RECKLINGHAUSEN'S DISEASE).

(Under the care of Mr. GEORGE HEATON.)

THE very curious condition of general fibrosis of the peripheral nervous system with which the name of Recklinghausen is associated is of great interest, both from the side of its pathology and also especially from the point of view of its etiology. It is generally looked upon as a vice of development,[1] and there is much to be said in favour of this view. In a certain number of cases, however, there is a history of trauma, and R. W. Smith[2] has described

FIG. 1.

Appearance of the patient upon admission.

"traumatic neuroma." In the case recorded below there is a very definite history of injury and it is not at all improbable that this was causally connected with the subsequent appearance of the neuro-fibromatosis. For the notes of the case we are indebted to Mr. A. W. Nuthall, resident surgical officer, and to Dr. W. Billington, late acting pathologist.

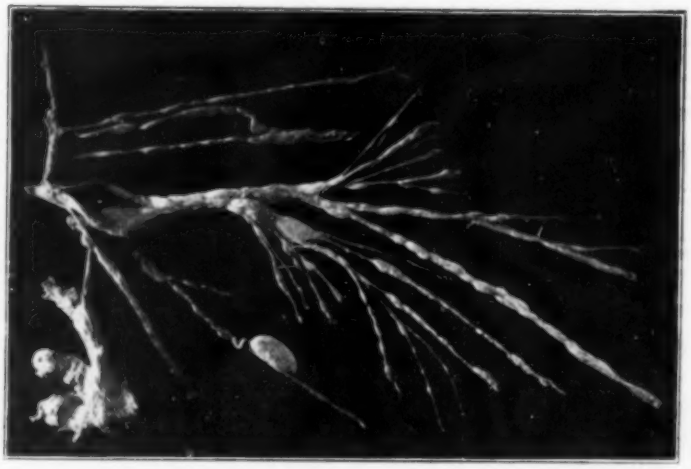
A man, aged 38 years, was admitted into the Birmingham General Hospital on June 2nd, 1902, complaining of a swelling of the right side of the face, of severe neuralgic pain in the right jaw, and of difficulty in swallowing. His history was as follows. At the age of three years he fell and cut his right cheek. Two years later a lump appeared

[1] Alexis Thomson: Neuroma and Neurofibromatosis, 1900, p. 105.
[2] A Treatise on the Pathology, Diagnosis, and Treatment of Neuroma, Dublin, 1849.

FIG. 2.

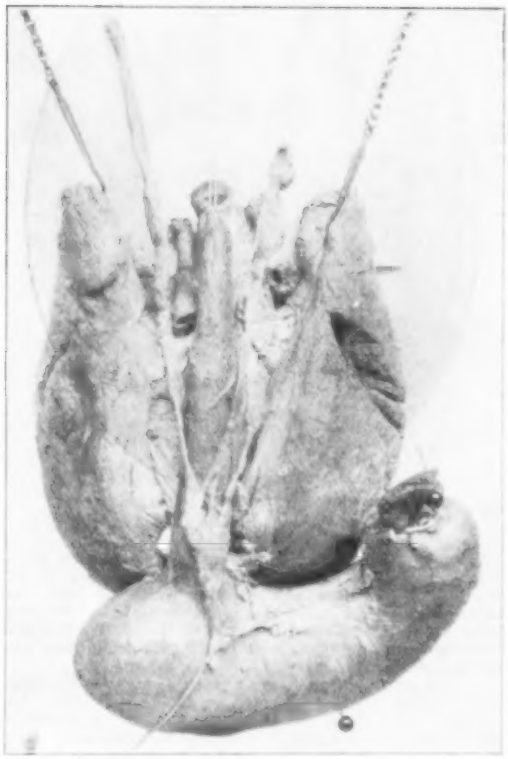
Tumour on external cutaneous nerve, weighing four ounces.

FIG. 3.



The lumbar plexus and upper part of the sacral plexus, showing the diffuse thickening of the nerves together with the presence of numerous definite fusiform swellings upon them.

FIG. 4.



The posterior aspect of the thoracic viscera and stomach. The greatly thickened vagi nerves are seen, also the œsophageal plexus and the final terminations of the vagi upon the surface of the stomach. Small distinct tumours are seen upon the finest terminal twigs of these nerves.

in the same cheek. This tumour slowly enlarged until at the age of 11 years it was removed. After this operation the right cheek continued to increase slowly in size and a definite swelling appeared below the right eye. In 1887, at the age of 23 years, the patient was admitted into Guy's Hospital under the care of Mr. (now Sir) Henry G. Howse. The condition was then noted as follows: "The tissues of the right cheek were much hypertrophied and the cheek was prominent. The right half of the face was swollen and a distinct, hard, lobulated tumour was present in the right infra-orbital region. This tumour was freely moveable and apparently encapsuled. From its lower end a string of little bead-like swellings could be traced running back to the angle of the jaw. Below the root of the zygoma there was a separate hard tumour resembling an enlarged lymphatic gland. Numerous other small superficial tumours in other parts of the trunk were noted; also a few on the forehead and right arm. All these tumours were fibrous and freely moveable." The tumour on the right side of the face was removed together with a portion of the hypertrophied cheek. The tumour, which was uniformly hard and whitish-grey in colour, was enucleated fairly easily, but the operation was attended by very free hæmorrhage and was followed by paralysis of the right facial nerve. After the operation the right cheek remained still much larger, thicker, and more prominent than the left, but the patient remained free from pain and discomfort for 14 years. Twelve months ago the right cheek became more swollen and he began to suffer from neuralgia in the right jaw; the swelling increased steadily in size and the pain became constant and severe. At times during the last few months the swelling of the right side of the face would suddenly increase, the cheek becoming distended and tense and the skin over it breaking out into superficial sores. After each such attack there remained a permanent increase of the swelling. A difficulty in swallowing due to some obstruction in the mouth was next noticed. This and the constant severe pain in the jaw caused the patient to lose flesh rapidly and to become very weak.

On admission the face was seen to be much distorted, the right side being huge while by comparison the left was much shrunken. (Fig. 1.) All the soft parts of the right side of the face below the eye were greatly thickened by what appeared to be a chronic hypertrophy or lymphatic œdema. The skin was thin and shiny and the subcutaneous tissues were boggy and inelastic. The right side of the nose, mouth, and chin was involved in the hypertrophied tissue, which hung down into the neck as a mass nearly two inches in thickness. There was right facial paralysis. The lower jaw was pushed down and to the left and was almost fixed; only with

difficulty could a finger be introduced between the teeth. Within the mouth a firm, elastic, globular tumour (about as large as a billiard ball) could be felt on the inner side of the ascending ramus of the jaw, occupying the right side of the mouth, fauces, and pharynx. This tumour in part projected between the upper and lower molar teeth and was the cause of the displacement of the lower jaw and of the difficulty in swallowing. Scattered about over the chest, abdomen, back, thighs, and arms were many swellings. These varied considerably in size. Many were small molluscum-like nodules, while others were large tumours, one in the left thigh being of the size of a goose-egg. The small nodules were cutaneous; the larger masses were subcutaneous. These tumours were for the most part painless and did not appear to interfere with the functions of the nerves upon which they occurred. An exception to this rule was in the case of a large tumour on the left musculo-spiral nerve near the elbow; on handling this tumour there was pain along the nerve and there was a sense of numbness and weakness in the forearm and hand. The skin generally was dry and coarse and of a dusky, bronzed appearance. The scin of the scrotum and penis was deeply pigmented. To relieve the pain in the jaw and

FIG. 5.

Lower half of the spinal cord (cut in two), showing the tumour near its lower extremity.

mouth the inferior dental and lingual nerves on the right side were divided within the mouth. At the same time the fibroma on the left musculo-spiral nerve was removed. The nerve fibres spread as a flat band in the capsule of the tumour. Considerable relief resulted from the neurotomy of the lingual and inferior dental nerves, and there was no evidence that the musculo-spiral nerve was injured by the removal of the growth from it. Later, on account of the difficulty in swallowing, it was decided to remove the tumour from the mouth. This was found difficult by reason of its size, its deep relations, and the free bleeding which occurred, and it was found necessary to ligature the common carotid artery. A few hours after the operation the patient died from exhaustion and shock.

*Necropsy.*—Each of the subcutaneous tumours was found to be situated upon a nerve which entered it at one end and left it at the other (Fig. 2). The nerve fibres ran over the outside of the tumour, in some cases in a single bundle and in others as a broad flat band or in several such bands. The tumours could easily be enucleated and the nerve fibres left behind. On dissecting out the peripheral nerves they were found to be almost all affected, though to a very variable extent. From its root in the spinal foramen to its ultimate termination each nerve showed at irregular intervals fusiform swellings (Fig. 3). Between these definite tumours the nerve was swollen and tortuous. The vagi nerves were markedly affected and in places were thicker than the index finger (Fig. 4). In the whole length from the skull to the stomach they showed diffuse thickening and at intervals distinct fusiform swellings. Their final ramifications on the surface of the stomach were thick and tortuous and presented many nodular swellings varying in size from that of an almond downwards. The phrenic nerves were similarly affected. The sympathetic system presented similar appearances. Small neuromata were present on the branches of the cardiac and solar plexuses and the splanchnic nerves were thick, tortuous, and marked by numerous distinct swellings. The solar ganglia were larger than normal, but did not show any marked changes; their branches, however, manifested the same peculiarities as the peripheral nerves generally. Nothing abnormal was noted in the brain or on the cranial nerves in their course within the skull. Near the lower end of the spinal cord, on its anterior surface and exactly in the middle line, was a fusiform swelling of the size of an almond, similar in appearance to the tumours on the nerves (Fig. 5). The thoracic and abdominal viscera were healthy. The swollen nerves had a semi-translucent, gelatinous appearance. The tumours were hard, greyish-white in colour, and definitely encapsuled; they could readily be separated from the nerve bundles which ran in the capsule. To every tumour not actually in the skin a nerve could be traced. Microscopically the tumours consisted of fibro-myxomatous tissue. Medullated nerve fibres could be found only in the capsule.

*Remarks by* Mr. NUTHALL *and* Dr. BILLINGTON.—We report this case because generalised neuro-fibromatosis is not very commonly met with and still more rarely do opportunities occur of making post-mortem examinations. Many of these cases drift into workhouse infirmaries and are lost sight of. This case illustrates very well the leading characteristics of the disease: the long history (in this instance extending over a period of about 33 years) and slow progress and the trifling functional disturbance that results from such widespread and extensive changes as are met with in the peripheral nerves. It is unnecessary to discuss the disease of which this is an instance, since the condition is so fully described in the recent exhaustive monograph by Alexis Thomson. For permission to publish the case we are indebted to Mr. George Heaton, under whose charge the patient was. We also gratefully acknowledge the courtesy of Sir Henry G. Howse in allowing us to make use of notes in his case-books at Guy's Hospital.

# Medical Societies.

## PATHOLOGICAL SOCIETY OF LONDON.

*Pathological Aspects of Recent Work upon the Pancreas.—Some Points in the Pathology of Spasmodic Asthma.—Sodium Cinnamate Leucocytosis.*

A MEETING of this society was held on Dec. 16th, Sir JOHN BURDON SANDERSON, Bart., the President, being in the chair.

Dr. E. H. STARLING and Dr. W. M. BAYLISS said that the present work on the secretion of the pancreas had been undertaken chiefly from a physiological point of view, but some of the results had a direct pathological bearing and the whole subject had been so completely renovated that any pathology must be bad which did not take these new facts into account. They first referred to the work of Claude Bernard who had shown that the introduction of ether into the stomach produced a flow of pancreatic juice, and Pawlow had shown that it was necessary for food or acid to pass into the duodenum before a flow of pancreatic juice was produced. The

view held was that the flow was produced by a local reflex. Dr. Starling and Dr. Bayliss found that introduction of acid into the upper part of the small intestine produced a flow of pancreatic juice. They then completely isolated a portion of the jejunum from all its connexions with nerves, and again introduced acid into the isolated gut and a flow of pancreatic juice was again produced. They therefore thought it probable that the secretion of the pancreas was promoted, not by a reflex stimulation, but by a direct chemical effect through the blood. The next step was therefore to scrape the epithelium from the jejunum, pound it up with acid, and inject it into the veins of an animal; the result of such an injection was at once to produce a large flow of pancreatic juice. The substance capable of producing this result they called "secretin," but they had not yet been able to isolate it. Secretin was identical in the frog, birds, and mammals, and when injected always produced a flow of pancreatic juice. The normal function of the pancreas thus depended upon the entrance of acid into the duodenum and the consequent production of secretin in the mucous membrane of the small intestine. By injecting secretin into a vein a flow of pancreatic juice had been readily obtained. Three ferments were present in the pancreatic juice, one which acted on proteids, one on carbohydrates, and one on fats. The juice collected from a fistula had a strong action on carbohydrates, a strong action on fats, but a very weak action on proteids. If, however, the juice was allowed to flow over the mucous membrane of the intestine its action on proteids was greatly increased. When pancreatic juice was collected from the duct it had practically no tryptic properties, but when added to the scraped mucous membrane of the intestine it became powerfully tryptic. The pancreatic juice thus contained trypsinogen and needed only a body present in the succus entericus to which the name "enterokinase" had been given to produce the tryptic ferment. Dr. Starling and Dr. Bayliss next dealt with the mechanism of the gastric and duodenal digestion. They mentioned Pawlow's observation that the pylorus remained contracted so long as the material in the duodenum was acid and only relaxed when it became alkaline and thus allowed a fresh quantity of acid chyme to pass. They then showed that the injection of secretin in a dog produced intense congestion of the intestine. This might be due either to the direct effect of the secretin or it might be the effect of pancreatic juice acting on the intestine in which the acid chyme was absent. By experiment on a dog they showed that this action was due to the pancreatic juice and not to the direct action of secretin. As long as the pancreatic juice remained in the ducts it had no action, since there were no carbohydrate and very little fat on which it could act and the tryptic ferment was inactive without the enterokinase. They suggested that the regurgitation of the succus entericus (which contained the enterokinase) into the pancreatic ducts would produce tryptic ferment and thus cause an acute pancreatitis. The effect of secretin had been tried in diabetes but without success.—The PRESIDENT asked if there was a definite relation between the amount of secretin injected and the amount of pancreatic juice produced.—Dr. H. BATTY SHAW suggested that in a case of gastro-enterostomy as secretin would be produced by the entrance of acid from the stomach into the intestine and would cause a flow of pancreatic juice into the intestine in which there was no food an enteritis would be produced. This was not borne out by actual clinical experience.—Dr. STARLING, in reply, said that the amount of secretion of pancreatic juice depended on the amount of secretin injected. He would have expected that an enteritis of the upper portion of the small intestine might have been produced by the action of the pancreatic juice in a case in which a gastro-enterostomy had been performed.

Dr. T. G. BRODIE and Dr. W. E. DIXON communicated a paper upon Some Points in the Pathology of Spasmodic Asthma based upon experiments in which they had studied the change in volume of a lobe of the lung by an adaptation of the plethysmographic method. All the symptoms of an attack of spasmodic asthma could be explained by the generally accepted view that the essential cause was the contraction of the muscular walls of the small bronchioles. Dr. Brodie and Dr. Dixon therefore gave in the first place a brief account of the innervation of these muscles, based upon previous work and upon their own experiments. The degree of bronchial constriction was determined by the amount of restriction of the air movements into and out of the lobe experimented upon, and tracings were shown which demonstrated that the motor fibres for the muscles run in the vagus. There was apparently no normal tonus in the bronchioles, because section of the vagi or destruction of the centre in the medulla produced no dilatation. They had further proved that these muscles were supplied by dilator nerve fibres which also reached the lung through the vagus. The evidence for the existence of these fibres depended upon the fact that if a tonic contraction was artificially set up—for instance, by the administration of muscarine or pilocarpine—subsequent stimulation of the vagus caused relaxation of the muscles, an effect which was maintained as long as the stimulus was kept up. Dr. Brodie and Dr Dixon had also shown that there were no motor fibres passing through the ganglion stellatum or arising from the upper thoracic spinal roots. Turning next to the reflex excitation of the muscles, they pointed out that reflex constriction might at times be produced by excitation of the sciatic nerve. The same result was obtained rather more frequently by excitation of the central end of the divided vagus. The best reflex effects were obtained, however, by stimulating the nasal mucous membrane and a spot well back on the nasal septum and high up was the most effective in this respect. No reflex effects were obtained from the cornea nor as yet had reflex dilator effects been observed. They pointed out that these reflexes were of great importance in connexion with the pathology of asthma. The spasm causing the symptoms of the attack could only be caused by an excitant acting peripherally upon the nerve endings or muscle fibres themselves, or reflexly through the medullary centre. The evidence pointed to the reflex origin as being most probable, and the recent clinical results obtained by Dr. H. A. Francis were certainly supported by their experimental results. At the suggestion of Mr. Shattock, Dr. Brodie and Dr. Dixon tried the effects of an injection of a saline extract of the sputum obtained from an asthmatic patient, but with negative results; similarly spermine (Charcot-Leyden crystals) produced no effect, so that there was no evidence forthcoming from such experiments that a local irritant was present in acute attacks of the disease. Turning next to the action of drugs upon the bronchial muscles, they stated that many, such as muscarine, pilocarpine, physostigmine, &c., produced constriction by acting upon the nerve endings. Others—e.g., barium, veratrine, bromine, gold chloride, &c.—acted upon the muscles and produced constriction. The effect of the first series of drugs could be entirely annulled by atropine, while those of the second were unaffected by it. The action of atropine was of great importance, as it was one of the drugs which had been empirically selected for the treatment of the attacks. A quite small dose of atropine entirely abolished the vagus effect, but it was questionable whether a dose sufficient to remove entirely the spasm in an acute attack of asthma could be safely administered. The other drug largely employed in the treatment of asthma, lobelia, was found to produce a very characteristic effect. When injected into an animal in which bronchial spasm had been induced by muscarine or pilocarpine it produced a transient dilatation and recovery, which in many ways recalled the effect of excitation of the vagus in such instances. The dilatation only lasted for quite a short period, from one to two minutes, after which the spasm once more returned. Referring next to other points in the treatment of asthma Dr. Brodie and Dr. Dixon pointed out that if the cause in any case consisted of an irritation of the nasal mucous membrane local treatment of the membrane with cocaine ought at once to cut short the attack. Instances of immediate relief procured in this manner had been recorded by Dr. H. A. Francis and others. If the attack was of central or reflex origin it should also be possible to cut it short by blocking the vagi, as, for instance, by the passage of a constant current through the neck, so that its conductibility was for a time prevented. Whether this was possible must be the subject of future inquiry.—Dr. W. S. LAZARUS-BARLOW asked if the authors had tried the effect of stimulating the mucous membrane of the intestinal tract, as it was well known that irritation of this mucous membrane often gave rise to attacks of asthma.—Dr. F. J. POYNTON asked if any experiments had been carried out with regard to the effect of the uræmic poison causing spasm of bronchial muscles.—Mr. E. B. WAGGETT asked if the spasm of the bronchioles produced by stimulation of the nasal mucous membrane was always so extremely slight as that indicated by the tracing shown.—Dr. BRODIE replied that the experiments upon the nose were performed in

unfavourable circumstances as a volatile anæsthetic had to be employed. Many tracings had been less marked than that exhibited. Nothing like an attack of asthma had ever been produced by nasal stimulation. No reflex spasm had ever been produced by stimulating the mucous membrane of the stomach or intestine. He regarded the asthma of uræmia as probably due to asphyxia of the respiratory centres in the medulla. Division of the vagi prevented this spasm.

Dr. SHAW read a paper on the Leucocytic Changes following Splenectomy combined with Intravenous Injections of Sodium Cinnamate. The experiments were undertaken in order to find out what share the spleen took in the leucocytic changes produced under varying conditions of leucocytosis. The series of experiments tended to confirm the view that the more complex leucocytes were derived from the simpler ones. Further, that the only immediate effect produced within a few hours by the removal of the spleen combined with the injection of sodium cinnamate was to intensify the final conversion of intermediate cells to polymorphonuclear cells—a change shown also to result from the mere injection of sodium cinnamate.

## OBSTETRICAL SOCIETY OF LONDON.

*A Contribution to the Natural History of Dysmenorrhœa.—Dermoid Cyst.—Exhibition of Specimens.*

A MEETING of this society was held on Dec. 3rd, Dr. PETER HORROCKS, the President, being in the chair.

Dr. G. E. HERMAN and Dr. H. R. ANDREWS communicated a paper entitled "A Contribution to the Natural History of Dysmenorrhœa" in which they compared a number of cases of dysmenorrhœa cured by dilatation of the cervix with a number of others in which dilatation of the cervix produced no benefit. They found no reason to think that dysmenorrhœa curable by dilatation was frequently associated with imperfect development of the uterus, believing that it began with the establishment of menstruation in about two-thirds of the cases and was acquired later in about one-third; that it almost always began before the age of 25 years, but might be acquired at any age. The result of treatment they considered not to be materially affected by the length of time which the dysmenorrhœa had lasted, the age of the patient when treated, or the duration of her married life. They found that in most cases cured by dilatation the time of commencement of pain was very near the time of commencement of the flow, while in most of the cases not cured by dilatation the pain began two days or more before the flow. In half of those cured by dilatation the pain was over in less than two days; in more than half of those not cured by dilatation the pain lasted more than four days. In four-fifths of those cured by dilatation the pain was paroxysmal; in three-fourths of those not cured by dilatation it was constant. In most of the cases cured by dilatation the pain was not relieved by lying down. Dr. Herman and Dr. Andrews gave details showing the severity of the pain and found that only a few patients were known to pass membranes and that in only a few were there physical signs of disease. They found no evidence of such narrowing of the cervical canal as to hinder mechanically the flow of blood through it, but thought it possible that some degree of smallness and rigidity of the canal might hinder the physiological dilatation of the canal which should take place during menstruation and so provoke painful contractions of the uterine body; but they were unable to adduce evidence of this.—The PRESIDENT agreed with Dr. Herman and Dr. Andrews that, speaking generally and broadly, it was true that when the pain in dysmenorrhœa was paroxysmal it was more likely to be of uterine than of ovarian origin; but he gave details of a case of undoubted ovarian dysmenorrhœa where there was a congenital absence of the vagina and where the uterus was represented by a mere band, and yet where the pain every month was so severe that the patient was in agony and was obliged to go to bed for several days. The ovaries, after every other means had been tried, were removed by abdominal section and the patient had never been troubled since, the operation having been done in 1896. He asked for information as to the method of dilatation. He believed that whatever theory in regard to the production of the pain or of its relief by dilatation might be correct it would be found that the alleviation or cure of the dysmenorrhœa was owing to laceration of the fibres. For this reason he had himself adopted a modification of Sims's operation—that was, in addition to slitting the cervix backwards from the os externum up to the posterior fornix he made a counter incision to the left or to the right of the cervix, which thus divided the cervix into two unequal parts, a quarter and three-quarters respectively. His object in doing this was to cut through the circular fibres twice, for he had found from experience that Sims's operation, even though it relieved for a time, was apt to be followed by a recurrence of the dysmenorrhœa owing to the cicatrisation of the parts, whereas by cutting through the circular fibres twice, each set—that was, the set in the one-quarter segment and the set in the three-quarters segment—contracted, and even when the active contraction passed off remained shortened, having no longer power to approximate, hence the increased space in the os externum and cervical canal remained more or less permanent. In this way he had treated many cases with conspicuous success, and certainly with better results than by mere dilatation, for obviously if dilatation were carried out to any slight degree the uterus was bound to contract again and the condition would soon be as before, whilst if carried to a considerable extent the parts were more or less lacerated. His colleague, Dr. A. L. Galabin, was in the habit of dilating with Hegar's dilators to a considerable degree—he thought to No. 19; and, as a rule, the parts were lacerated, as indicated by a dilator of a higher number passing more easily than the one immediately preceding it. Then, again, Dr. Herman and Dr. Andrews spoke of cases of stenosis of the os uteri as existing only in pictures in text-books. He could not agree to that, for he had seen cases of pinhole os where it was impossible to pass an ordinary uterine sound and where there was great dysmenorrhœa. Moreover, such cases were very satisfactorily treated by a modified Sims's operation. Again, he disagreed with the remarks that it was of no importance as to whether a patient passed membranes or not, inasmuch as the treatment was the same—namely, dilatation. His own experience was that dilatation or a modified Sims's operation was practically useless in membranous dysmenorrhœa. In all such cases he recommended careful and thorough curetting and the application of a strong caustic, such as iodised phenol or pure carbolic acid. Dr. Herman and Dr. Andrews had suggested a new theory as to the cause of the pain in these cases of uterine dysmenorrhœa—namely, that it was due to the cervix not dilating when the fundus and body contracted. He did not think this was a correct expression because the law was that when the fundus and body of the uterus contracted the cervix relaxed. Then, when in this physiologically relaxed condition it could be easily dilated if there were anything to dilate it, such as the bag of waters or if the amnion had ruptured the child's head, &c. Certainly there were some longitudinal fibres in the cervix which could draw it open even in the absence of these dilating forces, but they only came into operation at a later stage. Hence one did not find the os uteri patent in these cases of uterine dysmenorrhœa. Finally, he thought that whilst the menses when fluid found a free enough exit, they might when clotted inside the uterus require uterine contractions that amounted to miniature labour pains, and which were as painful sometimes as labour pains, to expel the clots.—Dr. HEYWOOD SMITH drew attention to the association between dysmenorrhœa and anteflexion of the uterus. Dr. R. BOXALL doubted whether, in such a case as that mentioned by the President, cessation of dysmenorrhœa, after removal of the ovaries, could be rightly regarded as affording conclusive evidence that the pain had been of ovarian and not of uterine origin.—Dr. A. E. GILES thought that the treatment by dilatation was not suitable for cases of dysmenorrhœa in which the pain occurred chiefly before the onset of the flow. He agreed with Dr. Herman and Dr. Andrews that obstructive dysmenorrhœa was a fallacy.—Dr. A. H. N. LEWERS found that the extent to which the cervix of a nullipara could be dilated varied considerably, but in a multipara much higher degrees of dilatation could be secured without much difficulty.—Dr. GALABIN thought that the proportion of cases of dysmenorrhœa which could be ascribed wholly and with certainty to painful uterine contractions was very small, and that much more frequently some inflammatory or congested condition of the endometrium was an element in the case, and that the addition of curetting to dilatation in the majority of cases increased the efficacy of the operation. He did not usually carry the dilatation beyond about No. 13 or 14 of Hegar's dilators. This did not generally lacerate the external os.—Dr. W. S. A GRIFFITH thought that the different degrees of pain which patients suffered depended more on the nerve sensibility of the individual than on structural variations of the uterus and its appendages.—Dr. H. BRIGGS agreed in the main with Dr. Herman and

Dr. Andrews in their conclusions as to the cases of dysmenorrhœa most likely to be benefited by dilatation or section of the cervix. He supported the Liverpool practice of a high degree of dilatation supplemented by a deep posterior section of the cervix throughout its entire length.—Dr. HERMAN said that Dr. Andrews and he were aware of the difficulties and uncertainties referred to by the President and Dr. Galabin and had alluded to them in their paper. The pain of pelvic congestion was often described as coming and going; but on close inquiry it would be found that each attack was said to last an hour or two; it was not a sharp, short spasm like that of uterine colic. In the case on which the paper was based the dilatation was of both the external and the internal os and was done with bougies graduated in size according to the catheter scale. Successive sizes were passed until considerable resistance was met with. Usually it was carried up to No. 12 or higher. After such dilatation the cervical canal remained larger than before for at least some months. This he had verified by measurement. When he commenced practice the regular treatment for bad cases of dysmenorrhœa at most hospitals, certainly at the London, was division of the vaginal portion. He was led to abandon that by meeting with cases in which the vaginal portion had been divided without benefit, but which were cured by dilatation with bougies of the os internum. He would like to know what meaning the President attached to the word "permanent" when he spoke of "permanent cures" of dysmenorrhœa. He (Dr. Herman) thought that the use of the word "permanent" was only justifiable if the patient's condition was known up to the time when menstruation ceased. It was so difficult in consulting practice to watch cases as long as this that he thought cases known to be permanent cures must be few. He had himself records of one case in which the cure of dysmenorrhœa lasted till the menopause. He would like to know how many cases of the "permanent cure" of membranous dysmenorrhœa the President had seen? He had known curetting and caustic to fail, not only in his own hands, but in those of others. He thought that dilatation was the more effective treatment of membranous dysmenorrhœa. He would also like to know how membranous dysmenorrhœa was to be prevented. Like others, he had seen cases in which the os externum was so small that it would not admit a probe, but the patients menstruated without pain. In such cases he thought that it was a good practice to divide the vaginal portion in order to prevent delay in the first stage of labour. When clots were passed from the vagina he knew no sure way of telling whether the blood had clotted in the uterus or in the vagina. Many small lumps, described by patients as clots, if carefully examined would be found to be rolled up membranes. The President's distinction between "dilatation" and "relaxation" seemed to him to be verbal rather than real. The cervical canal did enlarge during menstruation. He agreed that anteflexion was common with dysmenorrhœa. But his investigation and that of Vedeler showed that it was present with exactly the same frequency in women who menstruated without pain and these facts had never been controverted. Seeing that most patients with dysmenorrhœa were girls who except for their monthly pain were in perfect health, he did not think with Dr. Galabin that they were frequently suffering from endometritis or that dilatation cured them because it favoured the cure of endometritis. He agreed that it was difficult to distinguish the cases that could be cured by dilatation from those that could not, and it was the object of the paper to assist in this difficult task. The severity of menstrual pain depended much on the sensitiveness of the patient.

Dr. VICTOR BONNEY read a short communication on a Dermoid Cyst containing a large number of Epithelial Balls.—In the discussion which followed, Mr. ALBAN H. G. DORAN, Mr. MALCOLM, Mr. A. E. BUTLER-SMYTHE, and Dr. SPENCER took part.

Dr. GILES showed a specimen of Fibroma of the Ovary, and the case was discussed by the PRESIDENT, Dr. BRIGGS, and Mr. DORAN.

Dr. LEWERS, Dr. W. C. SWAYNE, and Dr. SIKES also showed specimens.

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WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 5th.—Mr. C. B. Keetley showed a patient who had been sent into hospital three weeks previously with a Rupture of the Ligamentum Patellæ. The patient was a middle-aged man. Five weeks had passed since the accident. The ruptured ends were brought together with silkworm gut. A piece of stout silver wire was inserted through the patella and the tubercle of the tibia as a temporary ligamentum patellæ. At present, three weeks after the operation, the patient could walk and extend the knee painlessly. The silver wire would be removed in two or three months.—Mr. G. A. Garry Simpson showed: 1. A child, in apparently good health, who last summer suffered from no less than 85 Tuberculous Abscesses of the Skin. The deposits under the skin were of about the size of the kernel of a hazel-nut. The nodules were scraped out with a Volkmann's spoon; the only other treatment was open air and good food. 2. A man who had recovered from Tetanus. A rusty nail perforated the sole of his foot for about one inch. The wound was irrigated with 1 in 1000 perchloride solution, but 14 days after the injury the man developed tetanus. Mr. L. A. Bidwell injected anti-tetanic serum into the posterior portion of each second frontal convolution. Mr. Simpson suggested that in such cases serum should be injected immediately after the injury without waiting for symptoms of tetanus and that oxygen should be forced into the wound. 3. A child who had got the tongue between the cogwheels of a clockwork engine. With the assistance of a plumber the machine was unsoldered and the tongue was released. The portion of the tongue caught in the cogwheels subsequently sloughed. 4. A patient who, in falling from a pear tree, ran a piece of wood for some inches under his scalp. By means of antiseptic precautions, drainage, and free oxygen to the wound a complete cure resulted in a few days.—Dr. S. D. Clippingdale said that in the child with multiple abscesses, in addition to the suggestions of tubercle, syphilis, or pus infection, farcy might be a possible cause.—Dr. A. Whitfield agreed with the diagnosis of tuberculosis. The tuberculides probably arose as bacillary emboli from some central focus. These emboli were probably either bacilli of extremely low virulence or dead bacilli. This would account for the mildness of the symptoms and the negative result of inoculation experiments. Probably the child has had, or still has, a tuberculous focus, possibly in the bronchial or mesenteric glands.—Mr. Keetley suggested, with reference to the case of tetanus, that all punctured wounds, with the possibility of infection by tetanus, should be opened up and disinfected in some such way as that suggested by Mr. Simpson.—Dr. Seymour Taylor showed two cases of Mitral Stenosis, accompanied in each instance by mitral regurgitation. The first patient, aged 40 years, had had rheumatic fever. In this case the administration of digitalis was followed by good results, the drug being specially indicated by the irregular pulse and the existence of chronic bronchitis. In the second patient, aged 25 years, who had been an athlete, there was no history of previous acute rheumatism. The murmur occupied the late diastolic period (presystolic). Great improvement resulted from rest without digitalis or other cardiac tonics.—Dr. Whitfield showed a woman, aged 36 years, with a symmetrical scarring eruption over the deltoid region in both arms. The disease commenced 20 years ago, with no history of injury. There were one or two similar smaller patches on the right buttock. Dr. Whitfield believed the disease to be an unusual form of scleroderma, but others regarded the case as one of keloid. However, the scar formed after exising the piece of infiltrated edge showed no sign of becoming keloidal.—Mr. Paton showed a woman, aged 58 years, who was operated on in September of this year for chronic intestinal obstruction associated with considerable loss of weight. Three inches of the colon were excised and the divided ends were united by two continuous sutures. The abdominal wounds were completely closed except for a small gauze drain. The patient recovered without any trouble except diarrhœa which was very difficult to stop. She had since almost regained her normal health and had put on nearly one and a half stones in weight.—Dr. A. E. Russell showed:—1. A case of Syringomyelia of the Cervical and Upper Dorsal Region of the Cord. The patient was a man, aged 50 years. The combination exhibited by the patient of muscular atrophy, dissociative anæsthesia, and trophic joint lesion presented a complete picture of syringomyelia. 2. A man, aged 34 years, who contracted syphilis 10 years ago. Five years ago he suffered from gastric crises; after 18 months these were succeeded by weakness of the legs. He also had laryngeal crises, lightning pains in the upper and lower limbs, and marked ataxia

of the arms and legs. The chief feature in the case was the marked muscular atrophy in the whole of the lower limbs. This was a rare phenomenon in tabes dorsalis.—With regard to the case of tabes dorsalis Dr. Taylor thought that there must be some predisposing factor besides syphilis. The disease was comparatively rare in women. In his opinion the man who indulged in excessive sexual excitement, if he contracted syphilis, was likely to become the victim of locomotor ataxia.

FORFARSHIRE MEDICAL ASSOCIATION.—A meeting of this society was held on Dec. 4th, Dr. A. J. Duncan being in the chair.—Dr. C. Templeman gave an account of a case of Typhoid Fever which showed post mortem no intestinal lesion. The symptoms of the case were those of a severe attack of typhoid fever. There were diarrhœa, hæmorrhage, green stools, vomiting, and coma. At the post-mortem examination there was no other affection in the abdomen but redness and slight enlargement of the mesenteric glands. There was no enlargement of the spleen. There was some congestion of the brain.—Several questions were asked to which Dr. Templeman replied. In his reply he said that he considered greenish stools occurred only in severe cases with bilious vomiting and that in all the cases from the district from which this case came Widal's reaction was obtained on examination of the blood, this being done in the majority of the cases.—Dr. A. McGillivray exhibited a Portable Storage Battery which could be used for all kinds of Eye Work, Cautery, Electrolysis, &c.—Professor J. A. C. Kynoch showed an Unruptured Tubal Gestation removed by operation and also a Subserous Uterine Fibroid removed by operation from a woman, aged 40 years, on account of its impaction in the pelvis.—Dr. H. C. Colman read notes of three cases of Diphtheria which illustrated various sequelæ of that disease. The first case was that of a boy, aged seven years, in whom, three weeks after a sore-throat not recognised as diphtheria, there occurred an alarming attack of heart failure, followed in a day or two by paralysis of the soft palate and complete paraplegia. The second case was that of a girl, aged four years, who, on the thirty-fifth day, after a rather severe attack of diphtheria which pursued an ordinary course, but when recovery seemed to be complete, developed an incomplete paraplegia with complete paralysis of the pupils and soft palate. These were rapidly improving with rest in bed and strychnine, when in ten days after their onset, or 45 days from the beginning, the heart suddenly failed. The third case was that of a boy, aged three years, who, 32 days after the onset of a mild attack, vomited and was rather collapsed and developed a rapid feeble pulse which still, 23 days later, frequently ran up to 100, though in every respect the boy seemed to be quite well. After a brief reference to treatment generally, emphasising the value of local application in addition to antitoxin, he referred in detail to the commoner sequelæ—viz., paralysis of the palate and of the intrinsic and extrinsic muscles of the eye, paraplegia, and heart failure. In discussing the last he distinguished between the form of heart failure which occurred only during fever and which was due to degeneration of the muscles caused directly by the poison circulating in the blood and the form that might occur even nine weeks later, due to a neuritis. He emphasised the great importance of rest in bed in treating all these forms and the necessity of observation of all patients for some time to minimise dangers. He inclined to the opinion that the sequelæ were more common nowadays because antitoxin saved many severe cases that would have ended in early death, and he doubted if there were any means of preventing their occurrence.—Dr. Duncan mentioned three cases of post-diphtheric paralysis which he had seen.—Dr. George Whyte referred to the pseudo-tabetic gait seen in some cases and the neuritis in others.—Dr. J. S. Y. Rogers mentioned a case of ulceration into the carotid in which death occurred from hæmorrhage and discussed the question of the dose of antitoxin.—Dr. J. Mackie Whyte emphasised the necessity of administering antitoxin, even though the case was seen a week after the onset.—Dr. W. E. Foggie mentioned a case in which nephritis occurred as a sequela. He considered that neuritis of mild form was more common than was supposed. He had seen one case of severe neuritis with both motor and sensory changes affecting both upper and lower extremities occurring six weeks after a recovery in three months. He had met with one case of neuritis of the heart nerve.—Dr. Colman replied that he usually gave 2000 units (B. W. & Co.) at once and repeated it again if required. He considered local treatment necessary owing to the probability of a mixed infection of the throat and that arsenic internally was justifiable in severe neuritis after diphtheria.

EDINBURGH OBSTETRICAL SOCIETY.—A meeting of this society was held on Dec. 10th, Dr. James Ritchie, the President, being in the chair. Specimens were shown by Professor A. R. Simpson, Dr. D. Berry Hart, Dr. G. Scott MacGregor, Dr. J. Lamond Lackie, and Dr. W. Fordyce.—Dr. N. T. Brewis read notes on Two Cases of Cancer of the Cervix at the fifth month of Pregnancy removed by Panhysterectomy, with remarks on the treatment of cancer during pregnancy. The first patient was 36 years old, had been married 15 years, and had given birth to nine children, the youngest being 16 months old. On examination she was found to be five months pregnant. The second patient was 30 years old and was the mother of six children, the youngest being three years old. Her menstruation was regular and excessive in quantity. Panhysterectomy was performed in both patients, who made uninterrupted recoveries, and on recent examination neither patient showed any trace of recurrence, one four years and the other two and a half years after operation. Dr. Brewis then considered the surgical treatment of pregnancy complicated by cancer of the cervix. If the disease was apparently confined to the uterus and there was reasonable hope that it could be removed and the mother cured, then operation should be radical and prompt. To save the mother's life was what was striven for in the earlier months, to save both mother and child was the aim in the later months. In the first three or four months vaginal hysterectomy should be performed. In the later months it was doubtful which operation was to be preferred but the experience of recent operators was almost entirely in favour of the vaginal route also in the later months. In the later months, when the child was viable and the aim was to save both mother and child, Cæsarean section should first be performed and the uterus should be removed afterwards by the abdomen. In six hysterectomies performed in the later months of pregnancy Dr. Brewis had found the operation to be easy and only a small quantity of blood had been lost. In those cases of cancer in which the disease had extended beyond the uterus and which afforded no hope that the mother could be cured of the disease, the interests of the child alone were to be considered. In inoperable cancer in the earlier months induction of labour might offer the mother the best chance, but in the later months Cæsarean section offered the best chance for both mother and child. This should be performed when the child was viable but should not be delayed till natural labour set in.—Professor Simpson, Dr. Berry Hart, Dr. H. M. Church, and Dr. Scott MacGregor made remarks on the paper and Dr. Brewis replied.—Dr. Berry Hart read a paper on the Relation of Hydatid Mole to Deciduoma Malignum, illustrated by photographs and microscopical sections.—Professor Simpson and Dr. F. W. N. Haultain made remarks on the paper and Dr. Berry Hart replied.—Dr. Lackie read a paper on a series of cases of "Non-septic" Puerperal Pyrexia. In the majority of cases of fever in the puerperium the origin was septic and the amount of disturbance depended on the organism and on the dose of the poison which was absorbed into the system. In cases of short duration the patients got well, some spontaneously, others as the result of active treatment. All rises of temperature after labour should be regarded with great suspicion, and when in doubt should be treated as real cases of puerperal septic fever. Cases other than those of the septic type occurred, and Dr. Lackie read the notes of six illustrative cases.—Professor Simpson, Dr. Fordyce, Dr. Berry Hart, Dr. H. O. Nicholson, Dr. G. Keppie Paterson, and the President discussed the paper.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 4th, Dr. J. Gordon, the President, being in the chair.—Professor W. Stephenson read a paper on Certain Forms of Menstrual Suffering and the Action of Permanganate of Potassium therein. Cases were selected to illustrate the effects of the remedy and the forms of suffering in which relief was obtained. There was abundant evidence that manganese possessed special therapeutic properties but nothing was known of its action. Professor Stephenson's experience was that direct and trustworthy results were to be obtained in many and varied forms of menstrual suffering when these were due to certain

vascular disturbances. Attention was directed to what Professor Stephenson regarded as a type of constitution or diathesis possessing a distinctive character or individuality as distinct in itself as that of the chlorotic constitution. In chlorosis the defect lay in the formation of the blood, in this other it lay in the blood-vessels and principally in the capillaries and venous system. Iron was indicated in the one and manganese in the other. Each might exist independently; they were also to be found combined. The condition was readily recognised by the colour of the hands which was familiar to all. They were of a dull red, generally cold, and when so they assumed a purplish tint, better described by the Scotch word "*blae*." Hence he had been in the habit of designating this as the *blae type* of constitution. In the full development, when the health became impaired, the colour of the face was often uncomfortably high, a dull, not a bright, red, often flushed, full, and swollen-looking (*Scotice* "*hoved*"), and at times assumed the *blae* tinge. The patients complained of being depressed, heavy all over, with loss of energy and a tendency to fall asleep if remaining quiet. The menstrual function was liable to be deranged even when the health was otherwise good; in some the flow was diminished and in others it was increased. The period was always accompanied by pain. In all the cases illustrating these features very striking and permanent results were obtained from the use of the permanganate. The tendency to undue fulness of the venous system disappeared and with it the varying forms of menstrual suffering as well as the general feeling of dulness, heaviness, and loss of energy. The usual expression of the patient was, "I feel lighter all over and have no pain to speak of." In the class of cases under review the distress was evidently due to a loss of the normal balance between the arterial and venous systems. A study of the cases recorded suggested the view that the phenomena of menstruation were associated with, if not due to, the rise of the tide in the venous system. Further, as it was evident that manganese, acting probably through the nerve centres, regulated the rhythmic vascular changes, trustworthy indications for its use were to be found in the evidence that constitutionally or locally there was a disturbance in the venous circulation as illustrated in the cases recorded by Professor Stephenson.—The following members took part in the discussion: Dr. D. W. Finlay, Dr. G. M. Edmond, Dr. A. Westland, Dr. R. G. McKerron, Dr. D. Rennet, Dr. J. F. Christie, Dr. A. Walker, Dr. A. M. Rose, and the President.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 12th, Mr. John Irving, the President, being in the chair.—Dr. A. Bronner read a paper on the use of Haab's Giant Magnet in extracting small pieces of iron from the eyeball. The point of the magnet was placed in front of the cornea and the electric current was turned on slowly and gradually and the foreign body, if in the vitreous, was drawn to the posterior surface of the lens through the suspensory ligament behind the iris into the anterior chamber. The old-fashioned method of making an incision in the sclera and of introducing the small point of the magnet into the vitreous was dangerous and often caused inflammation of the vitreous and detachment of the retina. The use of the giant magnet required a good deal of experience and patience. Dr. Bronner thought that in a large number of cases the eyeball could be saved if the foreign body were extracted at once and with care. He read notes of several cases which had come under his care. The giant magnet used at the Bradford Eye and Ear Hospital was a modification by Hirschberg of that by Haab.—Mr. A. L. Whitehead discussed the paper and Dr. Bronner replied.—Mr. A. E. A. Pearson read a paper on Isolation Hospitals and "Return" Cases of Fever.—Mr. J. F. Dotson read a paper on Intussusception of Meckel's Diverticulum.—Dr. A. Mantle showed a man, aged 43 years, suffering from Syringomyelia.—Dr. Allan exhibited (1) a Heart showing Stenosis of the Mitral and Tricuspid Valves; (2) an Aneurysm of the Aortic Arch (the arch gives off the thyroidea ima); and (3) a specimen showing Musculus Sternalis.—Mr. Pearson showed (1) Colon from a case of Ulcerative Colitis; (2) an Ileum from a case of Enteric Fever; (3) a Vaccination Scar Measure for rapid determination of a Scar Area; and (4) a Fœtus (four months) from a case of Variola Confluens.—Mr. G. Constable Hayes exhibited two cases of Choroido-Retinitis.—Mr. G. Paul Anning showed specimens of (1) Twin Pregnancy (six and a half months); and (2) two Separate and Unruptured Bags of Membranes and Placenta.—Mr. R. Lawford Knaggs showed (1) a Ruptured Liver; (2) a Large Abscess of the Liver communicating with a Bile Duct; (3) a Diaphragmatic Hernia of the Liver; and (4) Ulceration and Perforation of the Gall-bladder by a Stone (fatal perforation).—Dr. R. H. Crowley exhibited a specimen of Tabetic Arthropathy.—Dr. Priestley Leech showed (1) a case of Carcinoma of the Abdominal Wall involving the Colon and the Small Intestine; and (2) the Stomach and Heart from a case of Perforated Gastric Ulcer which was operated on.—Dr. T. Churton showed a case of Graves's Disease treated by Anti-thyroidin.—Mr. B. G. A. Moynihan showed (1) a large Semi-solid Renal Tumour; (2) a Stone removed from the Ureter; (3) several Stones removed by Lithotrity; (4) 218 stones removed from a Perineal Abscess; (5) a Calculus removed from the Prostate; and (6) a specimen from a case of Complete Prostatectomy.

GLASGOW SOUTHERN MEDICAL SOCIETY.—The fifth meeting during the present session of this society was held on Dec 11th. Dr. D. Macgilvray, the President, being in the chair.—Dr. J. Crawford Renton showed a number of most interesting Surgical Cases, among which may be mentioned that of a man who had been admitted to the Glasgow Western Infirmary suffering from a severe injury in the right lumbar region, received by falling down the hold of a ship. On the tenth day after admission he had a sudden seizure of bloody urine and became collapsed. Dr. Renton injected saline solution subcutaneously and exposed and removed the kidney, which was found to be almost torn through. The man then made a good recovery and expressed himself to the meeting as being as well as ever. Another case was that of a man who had been admitted suffering from urgent renal symptoms. Blood had never been passed but the urine contained traces of albumin. The patient was radiographed showing the presence of a large stone which was removed, the patient quite recovering. Dr. Renton said that in some cases of marked pain in the renal region it was difficult to determine the cause as many cases simulating renal calculi were found on exploration to be due to the presence of inflammatory adhesions around the kidney, the separation of which from the kidney caused the pain to disappear. Several cases of complete recovery from acute tuberculous peritonitis were also shown, the tubercles entirely disappearing after the admission of light into the abdomen by an incision. In connexion with the radical cure of femoral hernia Dr. Renton expressed his great satisfaction at the results which he had obtained by the operation introduced by Professor Roux of Lucerne. This operation consisted of the exposure and removal of the hernial sac, then passing a metal staple obliquely through Poupart's ligament and hammering it into the pubic bone, thereby effectively and permanently obliterating the canal. A most interesting case in connexion with the causes of intestinal obstruction was that of a young woman who was admitted with all the symptoms of appendicitis. She had pain and swelling in the right iliac region with rapid pulse and elevation of temperature. The morning after admission the symptoms greatly subsided, so Dr. Renton decided to wait before operating. Under suitable treatment the patient passed by the bowel a great number of pieces of cork varying in size from one-quarter to three-quarters of an inch, the quantity passed and collected being sufficient to fill a glass jar of the capacity of eight fluid ounces. It turned out that she had been in the habit of chewing pieces of cork while engaged at her occupation of bottling beer. These pieces she had swallowed from time to time, and, gradually accumulating, they caused the obstruction.—A vote of thanks to Dr. Renton concluded the meeting.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Dec. 11th, Dr. Heywood Smith, one of the Vice-Presidents, being in the chair. Dr. H. Macnaughton-Jones exhibited a series of Specimens illustrating Various Forms of Myomata, more especially nodular forms included in the primary growth and mucoid and calcareous degenerations.—Mr. R. T. A. O'Callaghan communicated notes of a case of Complete Procidentia Uteri of two years' standing in a girl, aged 18 years, treated by hysteropexy.—Dr. C. H. F. Routh, Dr. Macnaughton-Jones, Dr Herbert Snow, and Dr Heywood Smith discussed the case and concurred that permanent cure of complete prolapse by hysteropexy alone was hardly to be expected.

—Mr. E. Stanmore Bishop read a paper on Prolapsus Uteri with special reference to an operation for reproducing the sacro-uterine ligaments. He accepted the recent description of these ligaments by Professor A. Dixon and Professor Birmingham as consisting of mixed fibrous and muscular tissue and he considered these ligaments as the most important factors in maintaining the uterus in its proper position. He admitted Mr. F. B. Jessett's priority in supplementing gastro-hysteropexy with an operation upon these ligaments, though he had not been aware of it, and his own operation was essentially different. He then described his technique.—Mr. Jessett, after thanking Mr. Bishop for allowing him to see the paper before it was read and mentioning the different technique of his own method and the operations practised by Bovée and other surgeons, said that both Mr. Bishop and he himself recognised the important influence of the sacro-uterine ligaments, but neither of them trusted to an operation restoring them or their influence to cure prolapse without further surgical measures; he was, however, convinced that the principle of these operations was good, even though the details might differ and perhaps require perfecting.—Dr. Macnaughton-Jones pointed out that the importance of these sacro-uterine ligaments and operations for their repair were no new thing. B. S. Schultze, for instance, described them in his work on Displacements. The paper covered too wide a field to be considered at the present meeting.—After some remarks from Mr. Jessett and Dr. Routh it was agreed, on the suggestion of Dr. Heywood Smith, to adjourn the discussion to a future meeting, Mr. Bishop reserving his reply.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on Dec. 5th, Mr. E. Cresswell Baber, the President, being in the chair.—Mr. W. R. H. Stewart showed a case of Nasal Deformity and one of Strumous Ulcers of the Mouth and Tongue.—Mr. F. J. Steward showed a specimen of Malformation of the Œsophagus obtained from an infant five days old. The child had been quite unable to swallow, milk being regurgitated after five minutes. There was complete obstruction five inches from the gums. The specimen showed dilatation of the upper portion of the œsophagus which ended in a blind extremity about an inch above the bifurcation of the trachea. The lower portion of the œsophagus communicated at its upper end with the trachea.—Mr. Hunter F. Tod showed a case of Laryngitis Hypertrophica in a girl, aged 21 years, following prolonged nasal trouble.—Dr. Scanes Spicer gave a lantern demonstration on Some Recent Investigations on the Normal Fluctuations of Air Pressure in the Upper Respiratory Tract and the effect on these fluctuations of nasal obstruction artificially produced. He suggested that a naturally wide rima with the consequent diminution of normal pressure fluctuations and lessened rhythmical stimulus to circulation in the blood-vessels and so to lessened nutrition of the walls was the explanation of the origin of atrophic rhinitis.—Dr. Logan Turner showed a series of Anatomical Preparations demonstrating the Artificial Production of Œdema of the Larynx. He also showed a case of abnormal narrowing of the larynx and trachea, probably congenital in origin.—Dr. H. Tilley showed a case of Advanced Epithelioma of the Epiglottis with secondary infection of the cervical glands with the object of illustrating the relief obtained by removal of the primary growth through the mouth. Attacks of dyspnœa and extreme difficulty in swallowing were the chief symptoms. A radical operation was evidently quite out of the question, but Dr. Tilley had removed the primary growth at several sittings by means of Krause's and Watson Williams's cutting forceps. The relief to the symptoms had been extraordinary.—Dr. Wyatt Wingrave and Dr. Dundas Grant also showed specimens.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Dec. 10th, Dr. H. A. G. Brooke, the President, being in the chair.—Dr. H. Ashby communicated a paper on Rickets and Achondroplasia, illustrated by a series of sections thrown upon the screen by a lantern.—Dr. W. Milligan made some remarks upon the Etiology and Pathology of Aural Polypi. His remarks were illustrated by limelight views of microscopic sections of the various forms of polypi usually met with in diseases of the ear. Special reference was made to the histological characteristics of these growths and cases were mentioned illustrating various points which were of importance from the clinical aspect. In addition various photographs were demonstrated and explained.—Mr. F. A. Southam made some remarks on a second series of 50 Cases of Recurrent Appendicitis and showed specimens to illustrate the various pathological conditions met with in this affection. 23 of the cases, or not quite one-half, occurred in persons between 20 and 30 years of age, this being the period of life during which recurrent appendicitis was most common. The youngest patient was 10 years of age and the oldest was 53 years of age. In five cases the operation was performed after a first attack and in each instance marked lesions were found in the appendix, so that there would have been a recurrence of the attacks if the appendix had not been removed. In 10 cases the patients had suffered from a second attack. In six instances fæcal concretions were found in the appendix and in 11 cases, after several attacks had subsided without any formation of pus, suppuration had eventually occurred and necessitated operation. Several cases were mentioned where, after attacks of acute suppurative appendicitis, the patients had suffered from further attacks which subsequently required removal of the appendix. Attention was called to the fact that in many cases marked changes were found in the appendix and yet in the quiescent period between the attacks there had been an entire absence of any local signs or symptoms. It was mentioned that all the patients made a good recovery from the operation.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The monthly meeting of this society was held on Dec. 12th, Surgeon-Major Mark Robinson, the President, being in the chair.—Dr. C. O. Hawthorne gave a lecture on the Diagnostic Value of the Visual Field. A McHardy's perimeter was shown and its method of use demonstrated in testing the field of vision. Dr. Hawthorne referred to a perimeter as not only an interesting physiological instrument but as a great aid to correct diagnosis and therefore to a rational and successful treatment. The lecturer briefly reviewed the visual apparatus, pointing out that the nasal portion of the retina passed further forward than the temporal portion, and hence there was a wider field of vision on the temporal than the nasal side. There was also a larger field of vision in a downward than in an upward direction. The course of the nerve fibres in the optic commissure was lucidly explained by means of diagrams, it being shown that only the inner fibres crossed each other, while the outer fibres were continued on to the outer part of the corresponding optic tract. The various forms of hemianopsia—"homonymous," "double temporal," and nasal—were discussed, together with the lesions giving rise to them. Subsequently a number of perimeter charts and other slides incident to the subjects referred to were shown on a lantern screen.

BIRKENHEAD MEDICAL SOCIETY.—A meeting of this society was held on Dec. 12th, Mr. H. Laird Pearson, the President, being in the chair.—Mr. A. H. Butcher read a short paper on Hip-Joint Disease, with clinical notes of two cases recently under his care.—Dr. F. Johnston, Dr. J. H. Dixon, Dr. R. Owen Morris, and the President joined in the discussion upon the subject and Mr. Butcher replied.—Mr. S. H. N. Harrington read (for Dr. W. R. Dalzell) notes of a case of Cirrhosis of the Liver and showed the liver as well as sections made from it; also a skiagram of a Fœtus with great Deformity of all the Limbs.—Dr. Dixon showed a Fœtus of about six weeks' development.—Mr. J. H. Fardon showed a specimen of Calcareous Degeneration of the Aortic Valve.

# Reviews and Notices of Books.

*The Prevention of Disease.* Translated from the German by WILLMOTT EVANS. With an introduction by H. TIMBRELL BULSTRODE, M.A., M.D. Cantab., D.P.H. London: Archibald Constable and Co., Limited. 1902. Pp. xviii.–1063. Price 31*s.* 6*d.* net.

THE aim of this substantial volume is, so far as this country is concerned, entirely original. It is an effort, and a good one, to lay the foundation stone of what is termed "general prophylaxis" or, in other words, the application of the principles of preventive medicine to all diseases, whether they be infectious or not. The work, which is practically a system of general prophylaxis compiled by several

authors, has been translated from the German by Mr. Willmott Evans who is to be congratulated upon the accomplishment of a somewhat difficult task, and Dr. Bulstrode, who introduces the volume to the English reader in a highly suggestive essay, thus sums up the objects of the book: "It is the first attempt that has been made to view human disease in its entirety, whether communicable or not, from the standpoint of preventive medicine in the more comprehensive sense of the term. ..... The human economy has been repeatedly approached with the result of an ever-increasing knowledge from the medical, surgical, pathological, and psychological aspects, but it has not, save in an altogether too restricted sense, been approached from the view-point of the prevention of deterioration and disease." Certainly the programme of preventive medicine has not been as far reaching as could have been desired, but it has to be remembered that although the direct efforts of preventive medicine have not been as widely spread as it is to be hoped they will be in the future, still the indirect results of those efforts have been enormous. Nevertheless, we agree with Dr. Bulstrode that it has been reserved for the German work under notice to take a really comprehensive view of what should be understood by preventive medicine, and to endeavour to apply the idea of prophylaxis to all disease to which man is liable from his entry upon to his exit from life. Again quoting from the introduction, "Preventive medicine, as above set forth, strives to promote the quality as well as the quantity of life. Its highest function is not merely to prolong the expectation of life but to enhance the sense of well being during life."

In the work before us the several German writers deal respectively with that system of the body which they have most closely studied, but the opening sections of the book are devoted to the history of the prevention of disease. Here Dr. S. Goldschmidt traces the development of the prophylactic idea among the Chinese, the Israelites, and the Hindus, and this section contains some interesting information. For instance, it is stated, apparently on the authority of Bühler's "Grundriss Indo-Arischer Philologie und Altertumskunde," that among the Hindus "the child begins to be cared for even before he is born—in fact, during the first month of uterine life. By prayers and sacrifices the sex of the coming child is decided. For the fourth month a ceremony is prescribed to prevent miscarriage." The section which purports to give a historical account of the prevention of epidemic diseases is a little disappointing, but this is followed by a very able contribution upon general prophylaxis by Professor Martins. This writer in the course of his remarks—he is referring more particularly to Germany—laments the dying-out of the family physician, since he recognises in him the essential agent for the opportune application of the prophylactic idea to individuals. He contrasts the habit of calling in a medical man when illness is already at hand with that which is said to prevail with the Chinaman of paying his medical man only so long as he remains well. Certainly this book, if its spirit is properly grasped, should lead to an enhanced value being placed upon the medical practitioner who by his intimate knowledge of the family proclivities should aim at preventing the coming together of the several factors which go to make up what we term disease. The bacillus without the soil is as helpless as is the soil without the bacillus. But we must now briefly indicate some of the contents of the volume. Professor Martin Mendelsohn of Berlin discusses prophylaxis in heart disease and the following extract shows the tenour of the section: "Those with sound hearts as well as those with diseased hearts should be considered by the physician in respect to prophylaxis because ..... one of the most valuable and most satisfactory of the physician's tasks is to suggest prophylactic measures to prevent cardiac insufficiency from developing." Professor Hoffa of Würzburg and Dr. A. Lilienfeld are responsible for the section on Prophylaxis in Surgery, while Dr. O. Schaeffer applies the prophylactic idea to Midwifery and Diseases of Women. The important subject of the Prevention of Disease in Children is treated of by Dr. Rudolf Fischl, lecturer on diseases of children in the German University of Prague. The Diseases of the Nervous System and of the Special Senses are dealt with by various writers, and the Prevention of the Diseases of the Urinary Organs and of the Male Generative Organs is the joint work of Dr. Albrecht von Notthafft and Dr. Arthur Kollmann. The section on the Prevention of Venereal Diseases is written by Dr. Max Joseph of Berlin.

This sketch of the contents of the volume must suffice and we are glad to see that the publishers have recognised the importance of furnishing a capital index. A book such as this without an index loses half its value. The sections, as is the case in all composite works, vary in merit and interest, some are admirable, all are suggestive, and looking at the book as a whole, and more particularly at its aspirations, it must be regarded as an important contribution towards the development of that larger conception of preventive medicine to which we seem to be gradually moving and the medical officer of health, as well as the general medical practitioner, should derive inspiration from its pages. Messrs. Constable and Co. are to be congratulated upon their enterprise.

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*Modern Spiritualism: a History and a Criticism.* By FRANK PODMORE, author of "Studies in Psychical Research," &c. London: Methuen and Co. 1902. Two vols., pp. xviii., 307 and 374. Price 21s. net.

THE phenomena ascribed to spiritual agency are so frequently obtruded—or, should this word be thought wanting in respect, let us say thrust—before the public that no one can entirely remain in ignorance of them. Medical men are liable to be suddenly called upon to give an opinion on some perplexing and ill-told story, and an attempt to shirk answering an impossible question is often looked upon as a mark of ignorance of the whole subject. An exhaustive treatise on modern spiritualism was a work which was really wanted. Mr. Frank Podmore has for many years been known as an industrious worker at the subjects which have come under the observation of the Society for Psychical Research. In carrying out his investigations in connexion with this body he has displayed not only unsparing labour but also a perfect rectitude of purpose. It would have been difficult to suggest anyone better qualified to undertake to write a trustworthy history of modern spiritualism. We do not profess to have verified all the references or to have seen all the documents to which Mr. Podmore refers, but we entirely believe that the historical part of the book has been written with absolute candour and that it gives quite fairly the facts of the case. It is not a history written from selected facts and quotations compiled with a view to teach a doctrine but it is, on the contrary, a history written in the modern spirit and the critical remarks are founded on the facts. Spiritualism was not an easy subject to tackle, for, as Mr. Podmore points out, there is even a certain amount of ambiguity in the use of the word "spiritualism," since that term has been often employed to denote a philosophical attitude. In this book the word is used in the sense of a belief in the reality of intercourse between the spirits of the living and of the dead, and it naturally includes a description of the modes of investigation which have been employed to prove the "spiritualistic" hypothesis.

The first question which a writer of a book on this subject has to determine is at what period he shall begin his history,

for a belief in the possibility of communication with the departed is one of very ancient date. Mr. Podmore elected to deal only of modern spiritualism and this has certainly saved him from having to face difficulties from more than one quarter. The decision was probably a wise one and no reader can justly complain of any lack in the quantity of matter which is presented in the present work.

It may be well to give a general sketch of the arrangement adopted by Mr. Podmore in his treatment of the subject. After a brief introduction the Pedigree of Spiritualism is given in 11 chapters which deal amongst other things with possession and witchcraft, poltergeists, the sympathetic system of medicine, Mesmer and his disciples, spiritualism in France before the year 1848, the German somnambules, the English mesmerists and clairvoyance in England. The second book is devoted to the early history of spiritualism in the United States of America. The third book opens with a history of table-turning and table-talking in England, tells of "the American invasion" (as Mr. Podmore calls the advent of spiritualists to this country from the United States), and gives an account of private mediumship, physical mediumship in general, materialisation, spirit-photography, clairvoyance, and trance-speaking. There is a chapter on Science and Superstition and another giving a general survey of the whole movement. The fourth and last book is devoted to Problems of Mediumship and contains some details concerning Slate-writing, the Mediumship of Stainton Moses, Automatism, Dream Consciousness, and the trance-utterances of Mrs. Piper. A brief summary brings the book to a conclusion.

It is obviously impossible in this place to discuss at length the contents of this work nor would any useful purpose be served in doing so. It will be sufficient to indicate certain parts of the book which are worthy of at least the passing notice of medical men and to recall a few incidents which are mentioned in the history of the epidemic of spiritualism which afflicted this country about the middle of the last century. The chapters on Witchcraft, on Poltergeists, and on the Sympathetic System of Medicine are all worth reading; so, also, are the accounts given of Mesmer and of the English mesmerists. The records of the American spiritualists are amusing rather than instructive, but they somewhat pall on a second reading. The greatest credit is due to the plodding industry of Mr. Podmore for collecting such a mass of ill-written "experiences."

The serious attention given to table-turning by some of the English clergy in the "fifties" of the last century is worthy of note. The tables, it was found, answered questions readily but sometimes in a sense diametrically opposed to evangelical truth and in such cases it was presumed that they were possessed by devils. In one instructive case it was believed that a table was "actuated" by a deceased parishioner who confessed that he had only on one occasion previously visited the vestry of the church and then only for the carnal enjoyment of a tea-meeting. He had been in the habit of attending a dissenting meeting-house and since his decease had found much reason to regret that he had neglected the ministrations of the clergyman.

Mr. Podmore gives some interesting details concerning spirit photographs and "materialisation" and many particulars of the life history of Daniel Dunglas Home and of Dr. Slade, who was found guilty of "unlawfully using subtle craft to deceive certain persons," amongst whom was Professor E. Ray Lankester. The trial, it may be remembered by some readers of THE LANCET, arose in connexion with slate-writing, and on appeal the case was dismissed on a technical point, the words of the statute "by palmistry or otherwise" having been inadvertently omitted in the original indictment. Dr. Slade took advantage of the breathing time thus afforded him and left the country before a new writ could be served on him. The book contains some account of the doings of Mr. Guppy, a perhaps too brief reference to Mr. Newman Noggs, and a full consideration of the utterances of Mrs. Piper, concerning whose history an account was given about a year ago by Mr. Andrew Lang in the columns of the *Pilot*. This, however, is not referred to in Mr. Podmore's book. The author writes of mediums in terms of great goodwill and with an evident desire to be fair to them. In this fact the strength of the book chiefly consists. In writing of men of science Mr. Podmore is inclined to be severe. He expresses strong disapproval of the late Thomas Wakley's conduct in connexion with the Okeys. He does not admit that Dr. Carpenter made, as he claimed to have done, a thorough investigation into the higher phenomena of spiritualism, for Dr. Carpenter refused to attend dark *séances* and declined to investigate phenomena which occurred out of sight under a table. Nor do Faraday, Tyndall, and Huxley escape censure. It is not quite clear that Mr. Podmore realises the mental attitude of men of science, nor does he seem prepared to make the allowances for their little weaknesses which he is ready to accord to all such as write on slates or turn tables. If the subject had been treated by Mr. Andrew Lang it is true that a more brilliant book might have resulted; and had the late Mr. Huxley not had "better things to do" (the expression is his) he might have delighted his admirers by his treatment of the obvious, but the somewhat ponderous work of Mr. Podmore could hardly have been equalled as a source of amusement to any reader gifted with a genuine sense of humour.

## LIBRARY TABLE.

*The Nursing Profession; How and Where to Train.* By Sir HENRY BURDETT, K.C.B. London: The Scientific Press. Fourth year. Pp. xxxiv. + 373. Price 2*s.* net.—This issue of Sir Henry Burdett's useful book for members of the nursing calling contains the same features to which we called attention when reviewing the third year's issue.[1] The book certainly meets a want and so far as we can tell the present issue seems to be quite up to date.

*Official Year-book of Scientific and Learned Societies.* London: Charles Griffin and Co., Limited. 1902. Pp. 295. Price 7*s.* 6*d.*—The book before us is the nineteenth annual issue of this very valuable handbook. Every effort seems to have been made in order to make the information accurate and complete. It is impossible to make a book such as this as useful as it might be without the coöperation of the secretaries and officials of the various societies included, and we are glad to see that the editor of the year-book issues a warning in his preface that if the secretaries of certain societies who have sent in no details for two years running do not communicate with him the societies in question will be omitted in forthcoming issues. The book is of great value as a work of reference.

*Hadden's Pocket Vocabulary of Medical Terms.* By HENRY PAYNE, M.D. Brux., M.R.C.S. Eng., L.S.A. Third edition, revised and enlarged. By PHILIP COWEN, M.D. Durh., D.P.H. Cantab., and HERBERT DAVEY, Barrister-at-Law. London: Hadden, Best, and Co. Pp. 144.—The preface to this little work states that it was compiled for the use of registrars and Poor-law officials. The preface to the third edition, which is signed "P. C." and "H. D.," states that a short introduction has been written for that edition "which, it is hoped, will be found useful as a guide to the formation of words." The actual vocabulary itself seems good and will, we think, meet the want mentioned by Dr. Payne as being experienced by those for whom he wrote it. But we cannot praise the introduction. The authors of this seem to be unaware that though there is no letter *h* in Greek yet there

[1] THE LANCET, March 23rd, 1901, p. 870.

is a rough breathing which answers the same purpose. Thus we notice on page 9, "*rrhoea*, from Greek *reo*, I flow." Again, on page 24 we find the following words: *udor*, *ugiea*, *uper*, *upnos*, *upo*, *ustera* given as the Greek for water, sound health, hyper, sleep, hypo, and the womb respectively. Again, on page 21 *phagia* is not the Greek for "to eat." Before the next edition appears—and we do not doubt that there will be one—we should advise a revision of derivations.

*Practical First Aid.* By W. ROBERTSON, M.D., D.P.H. F.P.S. Glasg. Paisley: Alexander Gardner. 1902. Pp. 180. Price 1*s.* 6*d.*—This little book well deserves its name. It is practical and it deals with first aid and does not go further. We are specially pleased to see the following warning on page 126: "If a man is found insensible on the street, and smelling strongly of drink, he should be handled as if he were suffering from compression of the brain." Dr. Robertson is a police surgeon, so that he writes from an admirable standpoint as to knowledge of accidents and the like.

*For Her Sex: Extracts from a Girl's Diary.* London: W. Heinemann. 1902. Pp. 114.—This is a sad but cleverly written book, the story of which centres round the eternal problem of whether the same ante-nuptial purity is due from a man as is expected from a woman. Vera, the heroine, considered that it was, so that when she found that her affianced lover had had at least one mistress she came to the conclusion that she could neither live with him nor without him and so chose what she called "the only way." Vera was no fool, for although morbid and introspective she recognised the dangers, the vanity, and the selfishness of such introspection. The habit of introspection is doubtless at times of value, but unless carefully safeguarded it is wont to do irreparable damage. The book is quite worth reading, but we fancy that the heroine's sex, as a rule, will not profit much by her experiences. Suicide is always a weak remedy for evils, and in the case of a betrayed or wronged woman it is much better to live. "Revenge," as Becky Sharp remarked, "may be wicked, but it's natural," and despite Goldsmith's dictum, the dying of the victim does not wring the betrayer's bosom for more than a week.

*Diaries.*—Messrs. John Walker and Co., Warwick-lane, London, E.C., have sent us a most varied selection of their diaries for the pocket and otherwise. The prices vary from 1*s* to 11*s* 6*d.* according to style, size, and binding. All of them, however, are well and clearly printed on good paper.—Messrs. Rudall, Carte, and Co., of Berners-street, London, W., send us their Professional Pocket-book for 1903. This pocket-book forms a daily and hourly engagement diary, and though primarily intended for the musical profession is excellently adapted for the use of any professional man.—Messrs. Bemrose of Snow-hill, London, E.C., send us four calendars for hanging up, the daily leaf being torn off as required. Every leaf, in addition to the day and date, has a poetical quotation or a proverb printed upon it.

# Analytical Records
FROM
# THE LANCET LABORATORY.

### CIGARETTES (TURKISH).

(TOFANI AND CO., 18, BURY-STREET, ST. MARY AXE, LONDON, E.C.)

THOUGH opinions may differ very much as to the merits from a smoker's point of view of various cigarettes there can be no question of the desirability of the tobacco being as pure as possible and free from added substances. We believe such to be the case with these cigarettes which are made with tobacco of the Dubec type. We found that the gold-tipped cigarette is properly so described—that is, the metallic tipping at the mouthpiece was gold. In certain other cigarettes we discovered traces of copper due to the lettering. In the three kinds of cigarettes examined we found the following ratios of paper to tobacco:—"King's Own": paper 1, tobacco 30; "Extra 2": paper 1, tobacco 33 8; and "Yenidjeh": paper 1, tobacco 28. As regards flavour we find invariably that we are led to choose the cigarette containing the least paper and the most tobacco. A good deal depends upon the making of the cigarette, the amount of moisture present, the filling, and so on. Microscopic examination was satisfactory; we could find no objectionable additions such as sugar or liquorice.

### HOLBROOK'S SAUCE.

(HOLBROOKS, LIMITED, BIRMINGHAM.)

Sauces occupy a useful rôle in everyday dietary as appetisers, giving a zest for food which might otherwise be without interest to the palate. It is important, of course, that for this purpose the formula should be based upon ingredients that are free from reproach; metallic contamination, especially arising from copper, is suggested when dealing with acid preparations of this sort. We could not find, however, any evidences of such contamination in this sauce, although we operated on large quantities in the analysis. The sauce is of a pleasing piquant description and is evidently good and sound ingredients are chosen in its preparation.

### NIXODEL.

(W. LAWSON AND CO., 7, GOLSTONE-STREET, HOVE, SUSSEX.)

We have submitted two specimens of Nixodel to examination which revealed the presence of a powerful disinfectant, deodorant, and antiseptic, associated with agreeable scent. It is suggested to use the scented specimen with spray for the purpose of aerial disinfection, while the specimens without scent are more powerful, being intended for cruder purposes. Likewise a mixture is made suitable for the disinfection of stables, sheep pens, cattle trucks, ship holds, and so on. The preparation for household use is very agreeable and is effective in practice.

### MALT MEAL BREAD.

(CARR AND CO., LIMITED, CARLISLE.)

We have examined in a practical way and analytically specimens of bread made from a specially prepared malt meal. The flavour and texture of the bread, which is of a somewhat dark brown colour, are excellent and, as might be expected, the proportion of soluble, which are also nourishing, constituents is far greater than that of ordinary white bread. Our analysis gave the following results: moisture, 37·50 per cent.; mineral matter, 1·50 per cent.; proteid, 7·81 per cent.; and starches and sugars, 53·19 per cent. The mineral matter contained an abundance of soluble phosphates. The nutrient value of this bread is evident, while it is relatively easily digested.

### KRESOL.

(HAY, STEVEN, AND CO., KELVINDOCK CHEMICAL WORKS, MARY-HILL, NEAR GLASGOW.)

We find this liquid disinfectant to be substantially, as described, free from carbolic acid, alkali, and resin. It contains the higher homologues of phenol and is free from inert tar oils. The liquid mixes perfectly with a dilute solution of caustic soda without separation of oil. It is also soluble in all proportions of water, yielding a clear bright solution. It is a powerful disinfectant and antiseptic.

### BYROLIN.

(GRAF AND CO., 25, CHEAPSIDE, LONDON, E.C.)

Byrolin is an aseptic and antiseptic toilet cream. It is very pleasant to use and is agreeably scented. We do not, however, find any striking characteristic in regard to its

composition. It is described as representing cold cream and zinc ointment. It is said to be useful in gynæcological practice and for lubricating catheters.

AGURIN.

(THE BAYER CO., LIMITED, 20, BOOTH-STREET, MOSLEY-STREET, MANCHESTER, AND LONDON.)

Agurin is described as a new preparation of theobromine and we referred to it in our notice of the annual museum of the British Medical Association at Manchester this year. It is a double salt of sodium theobromine, being a white powder easily soluble in water and having a saline bitter taste; its solution exhibits an alkaline reaction. It has a well-marked diuretic action and has been used in the treatment of dropsical conditions referable to cardiac affections. Agurin differs in an important respect from diuretin in that it contains no salicylic acid, diuretin being a double salt of sodium theobromine and salicylate of sodium. Agurin is highly hygroscopic and it is recommended that a solution of the compound in peppermint water is the best way of keeping a standard preparation of the drug.

# New Inventions.

## THE "TABLOID" HYPODERMIC AND OPHTHALMIC POCKET CASE.

Messrs. Burroughs Wellcome and Co. have submitted to us a case which combines a complete hypodermic equipment, appliances for the ready preparation and application of ophthalmic solutions, and a series of four tubes containing large pellets ("soloids") for making antiseptic lotions. The case measures three inches square by one inch in thickness, is made of metal heavily plated and solidly constructed, and is capable of complete sterilisation by boiling. The syringe is entirely of glass and is furnished with hypodermic needles, an exploring needle, and a cannula for irrigating the canaliculus. An ingenious detail is a small vulcanite rod which is rendered electric by friction and used for picking up the little ophthalmic discs. The case might have been more lightly constructed by omitting one of the three divisional plates of metal which it contains,

for its great weight (nearly 12 ounces) renders it uncomfortable for pocket use; on the other hand, its massive construction will enable it to stand hard wear for years if carried in the travelling equipment of a surgeon's carriage and will amply repay in time its high cost. The syringe and needles are carried in clips on hinged plates and are thereby too much exposed to accidental injury, while experience has taught us to wish that all such clips in these metal cases should be secured by screws instead of solder, as no solder will stand frequent prolonged boiling when used for such small attachments. In the selection of the ophthalmic discs it might have been left to the surgeon to combine cocaine with other drugs as required, as there is never any need for hurry in the preparation of such solutions.

We can strongly recommend this case to practitioners who are wise enough to pay a good price for a solid, well-constructed article calculated to last thoroughly well and to offer its contents in a most convenient manner for rapid use in emergencies.

# Looking Back.

FROM

## THE LANCET, *SATURDAY, DEC. 25*, 1824.

And this deponent[1] saith, that the surgical lectures by Sir Astley Paston Cooper, bart. at St. Thomas's hospital, having been published in the said periodical work, he the said Sir Astley Cooper, on the eighth day of March last, as this deponent was informed and believes, expressed himself to the following effect: "although the publication of my lectures exposes me to the critical ordeal of my professional brethren, yet I fear it not; I care not who may be made acquainted with the doctrines I advance, the instructions I give, the principles I inculcate, while in this theatre—if they cannot withstand the test of criticism, they are unfit for your guidance, and ought to be exploded. Facts, and inevitable conclusions arising from those facts, compose these lectures; therefore I am perfectly indifferent as to who publishes them, and equally indifferent who may be made acquainted with them, for I am positive they cannot be refuted. I am well aware that I shall be assailed by the abuse of scoundrels; that envy, disappointed malice, and foul ingratitude, will endeavour to vilify my name; but, Gentlemen, such base and puny efforts are beneath the serious consideration of an honourable mind, and I shall continue to treat them, as I have ever done, with scorn and contempt." And the said Sir Astley Cooper, after making some observations upon the publication of hospital cases, further said, "with regard to my lectures, the case is different. I have a duty to perform in this theatre, and I have no objection for the whole world to be made acquainted with the manner in which it is discharged"; or words to that or the like effect.

[1] Extract from Affidavit sworn to and filed by G. L. Hutchinson, the Printer and Publisher of "The Lancet" on 16th December, 1824, in the matter of the motion in the Court of Chancery by Mr. J. Abernethy, Surgeon and Lecturer at St. Bartholomew's Hospital, for an injunction to restrain the publication of his lectures in "The Lancet."

BACTERIAL TREATMENT AT REIGATE.—Colonel Coke, R.E., held a Local Government Board Inquiry on Dec. 10th into an application of the Reigate corporation for a loan of £14,000 for works of sewage disposal. The town clerk stated that it was proposed to adopt the bacterial system, as the method of precipitation followed by land treatment had given rise to serious complaints owing to the land having become sewage sick. Accordingly, in 1898 an experimental bacteriological installation was laid down, various methods being tested, and so satisfied were the Council with the results obtained from bacterial oxidation beds fed with the Candy sprinklers that they desired to carry out that system for the treatment of the whole of the sewage of the borough. Samples of the effluent obtained from the system they proposed to adopt had been analysed by Mr. E. L. Jacob, medical officer of health, and Dr. Stevenson, the Home Office analyst, whose reports were satisfactory, despite the fact that brewery and tannery refuse had to be dealt with.—Mr. F. T. Clayton, the borough surveyor, explained fully the details of the scheme, which he stated would result in a direct saving of about £900 a year to the borough and indirectly in a further considerable economy.

# THE LANCET.

*LONDON: SATURDAY, DECEMBER 27, 1902.*


## THE ANNUS MEDICUS 1902.

### MEDICINE AND THERAPEUTICS.

*Tuberculosis and its Treatment.*

THE subject of Pulmonary Tuberculosis has claimed much attention during the past year. The efforts which are now being made to combat the spread of the disease and to treat patients suffering from the malady according to the most modern methods have received great encouragement by the action of HIS MAJESTY the KING. A large sum of money placed at his disposal for charitable or utilitarian purposes was at his wish devoted to the erection in England of a sanatorium for the treatment of tuberculosis. An advisory committee consisting of Sir WILLIAM H. BROADBENT, Bart., K.C.V.O., Sir RICHARD DOUGLAS POWELL, Bart., K.C.V.O., Sir FRANCIS LAKING, K.C.V.O., Sir FELIX SEMON, Sir HERMANN WEBER, and Dr. C. THEODORE WILLIAMS, was appointed to carry out the KING'S wishes. The secretaries to the committee are Dr. P. HORTON-SMITH and Dr. J. F. H. BROADBENT. The names of the members of the committee form a sufficient guarantee that the whole scheme will be carried out in an efficient and thorough manner. HIS MAJESTY was pleased to approve that the sum of £800 should be awarded in prizes for the best essays upon sanatoriums for the treatment of victims of tuberculosis. The authors of the essays were permitted to invite architects to collaborate with them in the preparation of the plans. The competition was open to the whole world and as a result 180 essays were sent in. After due deliberation the members of the committee were unanimous in their opinion that the essays by the following gentlemen were the best and, with HIS MAJESTY'S approval, the prizes were awarded in the order mentioned: 1st prize, Dr. ARTHUR C. LATHAM (London); 2nd prize, Dr. F. J. WETHERED (London); and 3rd prize, Dr. E. C. MORLAND (Croydon). Four essays were judged by the committee to be "of great excellence" and were awarded honourable mention; the authors were Dr. P. S. HICHENS (Northampton), Dr. TURBAN (Davos), Dr. JANE H. WALKER (London), and Dr. J. P. B. WILLS (Bexhill). The practical result of the competition will be evident when the proposed sanatorium is completed.

The International Conference on Tuberculosis held in Berlin in October proved of importance to the medical profession and the public from many points of view. The principal outcome probably was the formation of an International Central Bureau for the Prevention of Consumption. The members of the executive board were appointed during the conference and included representatives from Germany, France, Denmark, Hungary, and England. Combined action on the part of all nations is necessary if any satisfactory measures are to be adopted against the spread of tuberculosis. The formation of this committee is the first step towards a world-wide effort to combat a disease which everywhere is accountable for a high mortality.

During the year the Transactions of the British Congress on Tuberculosis, 1901, were published and bear witness to the excellent and important work performed by the congress. The various papers and discussions form a valuable compendium of the most modern views on the pathology and treatment of tuberculosis in all its aspects and should prove of incalculable use to the cause of preventive medicine.

Dr. W. HOWSHIP DICKINSON, in delivering the Baillie lecture at St. George's Hospital, gave an eloquent address with the parable of the sower as a text. He drew attention to the importance of the "soil" as well as of the "seed" in the etiology of pulmonary tuberculosis and other diseases of an infectious character. Dr. STEPHEN MACKENZIE, in the annual oration of the Medical Society of London, delivered in May, also dwelt on the factors which prepared the tissues of the body for the favourable reception of the seed. The remarks made by these two physicians emphasise the fact that for purposes of treatment the care of the soil has often a more practical result than the attempted destruction of the seed.

*Small-pox.*

The extensive outbreak of small-pox that occurred in the early months of the year afforded opportunities for the study of certain points in connexion with the disease which needed further elucidation. The statistics in regard to vaccination and revaccination once again proved the prophylactic value of these measures, and we trust that they will have due influence with our legislators when the question of compulsory vaccination is again considered.

In THE LANCET of June 7th (p. 1621) we published the Report of THE LANCET Special Commission on Glycerinated Calf Vaccine Lymphs, giving the number and nature of the "extraneous" bacteria found in the commercial vaccine lymphs. A useful and instructive amount of information was obtained. The Commissioners had placed at their disposal the results of a large number of cases in which various vaccines had been used, and they were more firmly convinced even than they formerly were by the results of their earlier investigations that the more free the lymph is from extraneous pyogenic and other organisms the less marked will be those inflammatory concomitants which are so familiar to all vaccinators.

The aerial convection of small-pox has always been a problem upon which somewhat diverse views have been held. A paper by Dr. J. C. THRESH was published in THE LANCET of Feb. 22nd (p. 495), which showed in a marked manner the influence in spreading infection of the hospital ships in which cases of small-pox were treated. He pointed out that the Orsett Union, which is nearest to the ships, has a population of 33,721 and that within a certain period 290 cases of small-pox had occurred. In the whole of the rest of the county (Essex) with a population of 782,700, in the same period there were but 162 cases—i.e., the incidence in the population of the Orsett Union was 8·6 per 1000 as compared with 0·21 per 1000 in the rest of the county. The facts as to the incidence of small-pox in the district above referred to are disquieting and make the question of site for the erection of small-pox hospitals a difficult one. Further, as we pointed out at the time, the recognition of the aerial convection of small-pox demonstrates that the attempt to check the spread of the disease by isolation alone is likely to prove a distinct danger to the community. The remedy, however, is in the hands of the Government, and that is to enforce by law both vaccination and revaccination.

*Typhoid Fever.*

Dr. W. H. CORFIELD, in the Milroy lectures which he delivered at the Royal College of Physicians of London, gave an elaborate historical account of typhoid fever, full of interest as showing the various phases of thought through which medical observers have passed at different periods during the progress of medical science. Dr. THOMAS CHERRY,

in an address delivered before the sixth session of the International Medical Congress of Australasia, also referred to many points in connexion with typhoid fever. The main fact elucidated by these observers was that although water is the most common medium for conveyance of the pathogenic bacillus, yet other sources of contagion occasionally play a part and it is therefore necessary to take all precautions to insure not only that the water-supply of a town or district is pure, but also that the disposal of sewage and waste organic matters of every kind is properly provided for. Dr. CHERRY further quoted cases by which it would appear that the typhoid bacillus is capable of existing for long periods of time in soil which is favourable to its growth.

The results which were obtained by anti-typhoid inoculation during the South African war have been anxiously awaited. Patience, however, will have to be exercised before definite conclusions can be arrived at. Dr. A. E. WRIGHT has partially lifted the curtain in an article which he published entitled "On the Results which have been obtained by Anti-typhoid Inoculation." He was able to obtain a large number of statistics, quite sufficient upon which to form preliminary opinions. The figures show that the inoculations undoubtedly possess prophylactic powers. There was at least a two-fold reduction in cases of typhoid fever in the inoculated compared with those who had not submitted to the process of inoculation. In certain cases a still greater reduction was achieved varying from a 6-fold reduction to a 28-fold reduction. Superadded to the diminished incidence of the disease there was a striking diminution of case mortality. Dr. WRIGHT was of opinion that in the aggregate the proportion of deaths to cases among the inoculated is approximately half that among the uninoculated. Whilst these results may be regarded as satisfactory yet there is one matter which requires grave attention—namely, that there is in connexion with most methods of protective inoculation a risk to be considered. It must be the task of the future to try to minimise the risk, on the one hand by establishing an adequate method of standardisation of the "vaccine" and on the other hand by combining with the study of the changes produced in the blood by anti-typhoid inoculation the study of the blood in those convalescent from the disease, and also the study of the success or failure of the process of immunisation in the actual typhoid attack.

*Yellow Fever.*

The etiological relationship between the mosquito and malaria is now generally accepted. The brilliant and withal somewhat heroic experimental investigations of our American *confrères* have further served to show almost conclusively that personal infection plays an altogether insignificant, if any, rôle in the spread of yellow fever. The investigations of Major WALTER REED and his colleagues seem to demonstrate that the prevention of this disease is largely dependent on the destruction of the *Culex fasciatus* or the prevention of its bites. The administration of Havana has lost no time in putting this theory to a practical trial. The results have been most satisfactory and the city of Havana is now pronounced to be almost free from yellow fever.

*Beri-beri.*

At a meeting of the Norwegian Scientific and Literary Society held at Christiania Professor UCHERMANN gave an account of the results of the investigations of the committee appointed for the consideration of beri-beri and showed that the problem had been solved as far as possible until the poison itself was determined. The main conclusions he arrived at were: (1) that beri-beri was an infectious disease due to a specific microbe; (2) that it was a constitutional disease the tendency to which was brought about by inadequate or physiologically insufficient food, especially the want of azote (albuminates) and fat; and (3) that it was due to an intoxication introduced through the food. The committee advised that certain regulations should be enforced in the victualling of ships in order to prevent the occurrence of beri-beri. Amongst these were the following. The use of tinned foods should be restricted; potatoes and fresh vegetables should be provided in as large quantities as possible; on long voyages the quantity of sugar and dried fruit should be increased; fat should be made a component part in the scale of diet in warm climates; and on long voyages the use of a filter (Chamberland-Pasteur) should be enjoined.

*Lectures of the Year.*

The Lumleian lectures of the Royal College of Physicians of London were delivered by Dr. FREDERICK T. ROBERTS, who chose as his subject the Comprehensive Study of Thoracic Phthisis. Many interesting points were raised in these lectures. The chief aim of Dr. ROBERTS was to impress upon practitioners the importance of avoiding a narrow conception of thoracic disease. The morbid changes in those cases of disease of the chest usually grouped as "consumptive" are by no means limited to the lungs, but in the large majority of instances other thoracic structures are more or less affected and due attention must be paid to those conditions in order that successful treatment may be adopted. Dr. ROBERTS also urged that attempts should be made to allay the excessive and unreasoning alarm which now exists amongst the laity as to the infectivity of pulmonary tuberculosis and to make the general masses of the population understand that with very simple precautions the risk of infection may be reduced to a minimum.

Dr. G. F. STILL delivered the Goulstonian lectures, selecting as his theme Some Abnormal Psychical Conditions in Children. He drew attention to some points in the psychology and development of moral control in the normal child and then considered the occurrence of defective moral control in association with general impairment of the intellect. He next passed on to make some remarks on the morbid defect of moral control associated with physical disease and he finally gave an exhaustive account of defect of moral control as a morbid manifestation without general impairment of the intellect and without physical disease.

The Croonian lectures were to have been delivered by the late Dr. J. W. WASHBOURN. Before his death he had written the lectures in rough and the task of revising and arranging them was undertaken by Dr. J. W. H. EYRE. The lectures were actually delivered by Dr. W. HALE WHITE. The subject was the Natural History and Pathology of Pneumonia. Many facts were discussed with regard to the morphology and conditions of growth of the diplococcus pneumoniæ.

Professor W. H. WELCH delivered the fourth Huxley lecture at Charing Cross Hospital. He gave an admirable account of the theory of immunity and of the researches which led to the establishment of the doctrine.

Professor W. ERB gave the opening address at the West London Post-Graduate College; it was an excellent example of his powers of clinical description, dealing with rare but definite types of spastic spinal paralysis, formerly included with many others under the term "spastic paraplegia."

*The British Medical Association.*

The annual meeting was held at Manchester under the presidency of Mr. WALTER WHITEHEAD. The Address in Medicine was delivered by Sir THOMAS BARLOW, Bart., K.C.V.O., who took as his text the thesis that "the advances in the treatment of disease have been made real and satisfactory in proportion as they have been harmonious with the complete knowledge of the natural history of disease."

## SURGERY.

The year 1902 has not produced any epoch-making advance in surgery, but this important branch of the art of healing has made steady progress in nearly every department.

### *Typhlitis or Appendicitis.*

The severe illness of the KING naturally drew public attention to the inflammations associated with the cæcum and its appendix and there have appeared numerous papers and articles dealing with the etiology and treatment of appendicitis. Many are prone to forget that the disease existed and was recognised long before the name "appendicitis" was applied to it and Sir SAMUEL WILKS has shown that ADDISON described "typhlitis" or "cæcitis" in his regular course of lectures on medicine at least as early as 1836, when the substance of his lectures was published, and very little has been added since to his description except that which relates to bacteria and surgical treatment. Moreover, the distinct share of the appendix in the etiology of the disease was recognised, although it was not credited with quite so much responsibility as we are now inclined to ascribe to it. How far foreign bodies should be considered as exciting causes of appendicitis is still a moot point, though nearly all pathologists are agreed that the percentage of cases in which a true foreign body and not merely a fæcal concretion is found in the appendix is very small. Mr. J. D. MALCOLM has recorded a case in which Dr. J. PERCY RENDALL found a pin in the centre of an appendicular concretion; the patient was six years of age and perforation occurred, death following in two days. The relation also of intestinal worms to the origin of appendicitis has attracted attention. METCHNIKOFF looks upon the ascaris lumbricoides and the trichocephalus dispar as frequent causes of the disease and BEGOUIN has described a case in which a thickened vermiform appendix contained 15 threadworms in addition to débris of food; the mucous membrane was superficially ulcerated. Mr. JONATHAN HUTCHINSON, jun., found at an operation for recurrent appendicitis that the appendix, which was thickened but not ulcerated, was crammed with threadworms, and he has pointed out that SANTORINI in 1724 mentioned that the appendix was often the resort of intestinal worms and suggested that it might form a safe retreat for them to breed in.

Appendicitis and pregnancy rarely coexist, although the child-bearing period covers the years in which appendicitis most commonly occurs, but it must be remembered that the appendix is certainly not so frequently affected in women as in men. Dr. J. D. DONOGHUE has recorded a case in which during the fourth month of pregnancy an acute inflammation of the appendix occurred with a localised purulent peritonitis. The abscess was opened, the appendix was removed, and, in spite of some rhythmical pains which seemed to threaten abortion, the pregnancy went on to full term and a normal delivery. The usual mortality of appendicitis during pregnancy is very high, the maternal death-rate varying, according to different writers, from 30 to 85 per cent. A case of much interest has been related by Dr. J. H. GALTON in which an appendix lodged in the femoral canal was inflamed; at the operation it was removed successfully. Somewhat similar are those rare cases in which an appendix associated with a femoral hernia becomes inflamed.

Sir FREDERICK TREVES's Cavendish lecture, delivered before the West London Medico-Chirurgical Society in June last, was concerned with appendicitis and forms a valuable *résumé* of the present general surgical opinions on the subject, and these may be summed up as follows. In all ultra-acute cases an immediate operation is needed; an immediate operation is needed whenever there is any suspicion of pus; in other cases it is seldom imperative that an operation should be discussed until about the fifth day; and, lastly, it is desirable, though not imperative, to remove the appendix after the first definite attack.

Mr. J. HOWELL EVANS reports a striking case of fulminating appendicitis in a little boy four years of age. The inflamed appendix had perforated, giving rise to a general septic peritonitis. The abdomen was opened, the purulent fluid was evacuated, the appendix was removed, and the abdominal cavity was copiously irrigated and drained. It was found necessary to repeat the irrigation later and the child completely recovered. Another important case was under the care of Mr. F. C. MADDEN of Cairo. The patient was a man, aged 35 years, who was seized with severe abdominal pain; laparotomy was performed 36 hours later and general peritonitis was found; the appendix contained two concretions and had perforated. The appendix was removed and some of the pus was swabbed out with sterilised gauze and a gauze drain was introduced. Later, the cæcum became much distended and the patient had signs of severe intestinal obstruction. Incision of the distended cæcum and washing out the colon were followed by recovery.

### *Gastric Ulcer*

The trend of surgical opinion at the present time is towards operation in many cases of gastric ulcer even when no perforation has occurred. Recurrent hæmatemesis is one of the most urgent conditions calling for operation and Mr. C. W. MANSELL MOULLIN has recorded two cases. In these the operation consisted of excision of the ulcer and suturing of the edges; one patient recovered. In another case Mr. MANSELL MOULLIN excised a gastric ulcer for very severe pain and uncontrollable vomiting. Recovery was ultimately complete, though the vomiting temporarily persisted. In three other cases of severe hæmatemesis in which the same surgeon had previously operated all the patients completely recovered. Mr. THOMAS H. KELLOCK has related an interesting case of a woman, 36 years of age, who had suffered from severe chronic dyspepsia for 19 years and who latterly had become very wasted. When the abdomen was opened a tense band was found leading from the hepatic part of the lesser omentum to a hard depressed spot on the posterior wall of the stomach near the cardiac end. This band was ligatured and divided and the hard patch on the stomach wall on being incised was found to be a chronic ulcer with indurated edges. The patient completely recovered and rapidly put on flesh, gaining 30 pounds in weight in five months. Probably much of the pain was due to the traction of the band whenever the stomach became distended with food or gas.

Mr. A. E. BARKER, Mr. C. B. KEETLEY, and Mr. T. KENNEDY DALZIEL have recorded series of cases of operation on non-malignant disease of the stomach with very satisfactory results. In all cases of operation on the stomach not immediately urgent careful lavage of that viscus for a few days preceding the operation is very useful. In many of the cases in these series gastro-enterostomy was performed and at the present time it may be said that this is the operation of choice for most of the chronic non-malignant affections of the stomach. Posterior gastro-enterostomy, which was first described by HÄCKER, is that most employed, but if extensive adhesions bind down the posterior wall of the stomach the anterior operation may have to be performed. The posterior operation is usually carried out by making an opening through the transverse meso-colon, but Mr. J. BASIL HALL has suggested that the opening should be made through the great (gastro-colic) omentum and he claims that by this method much time

is saved. He has reported four cases in which he has employed this method, all the patients doing well.

*Malignant Disease of Stomach.*

An almost complete gastrectomy for malignant disease was performed by Mr. G. A. SYME of Melbourne; the patient was a woman, aged 55 years, who had had gastric symptoms for seven months; she recovered well from the operation and was able to resume her ordinary diet without suffering from any symptoms of dyspepsia. Mr. MAYO COLLIER performed the operation of gastro-jejunostomy on a patient suffering from a large pyloric growth; he recovered rapidly after the operation and 15 months later he was still perfectly well. The naked-eye diagnosis of malignant disease of the stomach is frequently very difficult and undoubtedly non-malignant growths have occasionally been considered to be malignant. This is possibly the explanation of Mr. MAYO COLLIER'S case, but it appears certain that in some cases physiological rest of an organ has been followed by atrophy of a malignant growth.

*Thrombosis of Gastric Veins.*

A few instances have been recorded of apparent intestinal obstruction in which, however, there has been found no mechanical obstruction but an interference with the circulation of a portion of the alimentary canal. Mr. HERBERT W. PAGE has recorded a case belonging to this category in which a man, 50 years of age, suffered from the signs of acute intestinal obstruction. He had had thrombosis of some veins of the left leg after an attack of typhoid fever, and later the femoral vein of the same side was thrombosed. When the abdomen was opened the stomach and duodenum were found to be greatly distended and dark purple in colour; but all the intestine below was completely collapsed. Nothing could be done and the patient died a few hours later. At the necropsy the stomach was found to contain about two pints of dark blood and the condition was apparently caused by thrombosis of the veins of the stomach and duodenum leading to complete paralysis of those viscera.

*Thoracic Affections simulating Abdominal Disease.*

While treating of the surgery of the abdomen a valuable paper by Mr. H. L. BARNARD deserves mention, in which he has collected a number of cases where disease of some thoracic viscus simulated abdominal disease, and thus there is great risk of an abdominal section being performed for an attack of pneumonia or pleurisy. ANDRAL recognised this possibility 70 years ago and medical literature contains here and there references to such errors of diagnosis, consequently the surgeon should take care not to be misled.

*Inoperable Cancer.*

The question of the treatment of inoperable carcinoma of the breast has been much debated during the past year. It formed the subject of an extensive discussion at the Manchester meeting of the British Medical Association and very varied opinions were expressed. At the present time it may be said that there are two main methods: the first is oöphorectomy with or without the administration of thyroid extract, and the second is electrical treatment. The results of oöphorectomy have varied greatly and it is probable that many of the unsuccessful cases have not been published. Certain it is that in a few cases very brilliant results have followed oöphorectomy, especially when combined with thyroid feeding. Mr. WALTER EDMUNDS has described a case in which he performed oöphorectomy and gave thyroid extract and great improvement followed, and several other similar cases have been described. In a few instances improvement has resulted from thyroid feeding alone, as in cases recorded by Dr. F. PAGE and Dr. W. H. BISHOP and by Mr. A. MARMADUKE SHEILD. In cancer of the uterus also thyroid feeding has proved useful according to Dr. R. BELL and Dr. H. A. BEAVER. The value of some forms of electrical treatment is undoubted in certain cases of cancer. Many rodent ulcers and some epitheliomata have disappeared under the influence of the Roentgen rays and for these forms of carcinoma they are a useful method of treatment, though where excision can be readily performed that should have the preference. For inoperable carcinomata of the spheroidal-celled variety the x rays appear to be of some value; up to now about a dozen cases have been recorded in which marked benefit has resulted and in some instances complete recovery has ensued. The danger of an x-ray dermatitis has to be borne in mind, but this, unless extremely severe, is a small matter in comparison with the benefit which may result. In America COLEY has described the action of the x rays on sarcoma: in one case where numerous recurrences had taken place the employment of the x rays was followed by an apparently complete recovery. High frequency currents have also been employed and in some cases with remarkable effect. Dr. JAMES ALLAN has published four cases in which this method has been used. One was a sarcoma of the antrum of Highmore, two were carcinomata of the breast, and one was an epithelioma of the cervix uteri. In all great improvement occurred and in three of the cases all signs of the malignant growth disappeared. It is too early in the history of these applications to express any decided opinion as to their utility, but the reported results are sufficiently good to justify their more extended employment.

*Surgery of the Heart.*

The suturing of wounds of the heart now occupies a recognised place in surgery. It is rarely, indeed, that a surgeon sees a wound of the heart in time to treat it but sufficient cases are now on record to demonstrate that the heart may be sutured with comparative ease and that the hæmorrhage can be readily controlled. Dr. HARRY M. SHERMAN of San Francisco has collected 34 cases of suture of the heart; of these five patients died on the table from hæmorrhage or shock and 10 soon afterwards—six died from sepsis, but 13 recovered. These results are very good. Silk sutures have been mainly used, generally interrupted. The ventricles were injured 32 times and to these sutures are more easily applied than to the auricles. The best flap for exposing the heart contains the inner ends of the fourth and fifth ribs which are divided and luxated from their sternal attachments and the flap is turned inwards like a door. Sir LAUDER BRUNTON in view of some experiments which he has performed has suggested that it might be possible to treat mitral stenosis by surgical methods. The experiments have up to the present not been carried very far and therefore it is quite impossible to say whether it will ever be anything more than a suggestion.

*Volkmann's Contracture.*

VOLKMANN'S contracture is a very troublesome condition resulting from severe injury, especially to the elbow and forearm, and sometimes from the splints which are applied after the injuries. Great variety of opinion exists as to the exact etiology and mode of production, but it seems fairly certain that there is a great deal of new fibrous tissue formed. Mr. LEONARD S. DUDGEON has contributed a very complete paper on the subject containing notes of 15 cases. The treatment that has been adopted varies; some surgeons have had good results from tendon lengthening, while others have found massage and electrical treatment of much service.

*Nephropexy.*

To improve the results of nephropexy, whatever method of suturing be employed, Mr. THOMAS CARWARDINE has introduced the application of "the strongest liquid carbolic acid" which is painted all over the surface of the kidney except the hilum. In this way the surface becomes covered

with granulation tissue in a few days, by which "intimate and firm incorporation of the kidney with the surrounding tissues" ensues. No harm seems to have followed the application of the carbolic acid.

*Cocainisation of the Spinal Cord.*

Cocainisation of the spinal cord will probably never be employed to any great extent, for though some French surgeons have used the method frequently it is by no means free from danger. There may, however, be cases in which its employment is useful and Dr. ROBERT H. RITCHIE has recorded an amputation of the thigh in which this method was employed. The patient was 78 years of age and moist gangrene of the right leg occurred up to the knee. He had a mitral systolic murmur and the cardiac apex was displaced downwards and to the left; his arteries were atheromatous and he had dyspnœa. In these circumstances general anæsthesia was thought to be impossible, so cocainisation of the spinal cord was employed, a small quantity of a 2 per cent. sterilised solution of eucaine being used. Although sensation was not completely abolished analgesia was present and the operation was successfully performed, the wound healing by first intention.

## OBSTETRICS AND GYNÆCOLOGY.

*The Development of the Urino-Genital Tract.*

There is still much that is obscure and difficult to explain in the development of the urino-genital tract, but year by year our knowledge of the subject is becoming fuller and more accurate. Dr. D. BERRY HART'S work in this branch of medical science is well known and his fellow gynæcologists will not be slow to indorse the compliment paid to him when he was asked to open a discussion upon this subject before the Physiological and Anatomical Section at the meeting this year of the British Medical Association at Manchester. In a paper of much interest he put forward his views as to the part played by the Wolffian ducts in the development of the vagina and hymen. The conclusions at which he arrived were as follows: that the tubes, uterus, and upper two thirds of the vagina are Müllerian in origin; that the lower third of the vagina and vestibule are derived from the urino-genital sinus; and that the hymen is derived from epithelial proliferations of the lower ends of the Wolffian ducts. The vaginal epithelium and that of the portio are in the adult of a multiple squamous nature and arise in the three and a half months embryo by an upward proliferation from the Wolffian bulbs.

*Ectopic Gestation.*

The past year will always be memorable in the history of obstetric medicine in London because for the first time the Bradshaw Lecture at the Royal College of Physicians of London, instituted 21 years ago, was delivered by an obstetric physician, Dr. C. J. CULLINGWORTH. The subject of the lecture was Intra-peritoneal Hæmorrhage incident to Ectopic Gestation, a matter upon which the lecturer was able to speak with the highest authority. A very interesting review was given of this important condition, largely based upon Dr. CULLINGWORTH'S own experience. In concluding his lecture he uttered a plea for the continued association of gynæcology with medicine. Only in this way would it be possible to exercise some restraint upon the surgical enthusiasm of the gynæcologist and to inspire him with that reverence for accuracy of diagnosis characteristic of the best type of scientific physician, which otherwise he might be so likely to lose. In connexion with the subject of intra-peritoneal hæmatocele an interesting paper was communicated to the Obstetrical Society of London at its November meeting by Mr. W. SAMPSON HANDLEY. He demonstrated the fact that besides the common well-known form of peri-tubal hæmatocele, what he termed a para-tubal hæmatocele might be met with. This was due to the formation of an encysted collection of blood with a capsule of fibrous tissue attached to the tubal wall and inclosing within it an original rupture of the tube. A most important paper has also been published by Dr. F. H. CHAMPNEYS during the past year entitled "A Contribution towards the Study of the Natural History of Tubal Gestation," being based upon a series of 75 cases admitted into St. Bartholomew's Hospital. The striking result is arrived at that no less than 34, or 45·3 per cent., of the cases of intra-peritoneal hæmatocele recovered without any operative interference. As Dr. CHAMPNEYS rightly points out, if the current teaching of many writers had been followed nearly all these cases would have been operated upon and on recovery would have been considered as lives saved by operation. One of the contentions put forward by the writers who advocate operation in these cases is that patients who have an intra-peritoneal collection of blood removed by operative interference make a better and more complete recovery than those in whom the blood is left to be absorbed. The burden of the proof of this statement lies with the obstetricians who recommend operation and the amount of subsequent disability on the part of the patient must be very considerable to justify an operation which puts the patient's life in jeopardy for a condition which under expectant treatment entails no such risk.

*Cancer of the Uterus.*

The Address in Obstetrics at the meeting of the British Medical Association at Manchester was delivered by Professor W. JAPP SINCLAIR who took for his theme Carcinoma in Women, chiefly from its Clinical Aspects. The pathology of cancer, both old and new, was first dealt with and then the future of treatment and the aims of clinical research were considered. Much of the evidence brought forward was intended to dissipate the present somewhat pessimistic views which are held by many on account of the unfavourable results of operations for cancer of the uterus. So far from these pessimistic views being correct the results obtained by many of the best-known operators continued to improve and to give the greatest encouragement to renewed efforts in the future. Better immediate results were being obtained and the percentage of cures had increased—that was to say, the number of cases free from recurrence after a lapse of five years had become greater. One of the main objects of the address was to suggest that the secret of the cause of cancer in general would be discovered by the study of cancer of the uterus and that the methods most likely to lead to such a discovery were exact clinical observations followed perhaps and corroborated by experimental research.

The Surgical Treatment of Cancer of the Uterus was discussed at the International Gynæcological Congress at Rome and papers were read by POZZI, JONNESCO, WERTHEIM, and FREUND. The advantages and disadvantages of abdominal hysterectomy were fully discussed, and while POZZI was inclined to reserve the more extensive operation for special cases and thought that vaginal hysterectomy would continue to be, at any rate at present, the operation of choice, many of the other speakers were in favour of the more extensive and complete operation by the abdominal route. The question is one that must very largely depend upon the degree of frequency with which the glands are affected in what appear clinically to be operable cases of carcinoma. Upon this point we find a considerable difference of opinion. That cases do occur where no recurrence takes place after even so relatively incomplete an operation as supra-vaginal amputation is shown by Dr. A. H. N. LEWERS'S statistics. He has had eight patients, or 24·8 per cent. of 33 cases of supra-vaginal amputation of the cervix, who have remained free from recurrence for periods varying from four to 15 years. He has also had six patients, or 21·4 per cent. of 28 cases of vaginal hysterectomy for cancer of the cervix, who have remained free from recurrence for periods varying from four to more than

seven years after the operation. In these 14 patients, at any rate, it is quite impossible that the glands could have been implicated. WINTER as a result of his investigations thinks that the glands are practically never implicated before the cellular tissue of the broad ligaments, while MACKENRODT, GUSSENBAUER, and SCHUCHARDT maintain that infection of the glands may occur even when the vaginal cul-de-sacs and broad ligaments appear to be free from disease. WERTHEIM, on the other hand, holds that the involvement of the glands does not occur with any regularity and cannot be predicted with any certainty. A very marked diminution is undoubtedly taking place in the mortality of cases of abdominal hysterectomy for cancer of the uterus—no doubt due to the improvements in the technique of the operation; and when we find that of the first four speakers at the Congress JONNESCO, WERTHEIM, and FREUND were all strongly in favour of the more extended and thorough operation it is impossible to avoid coming to the conclusion that further evidence and experience may tend to confirm the somewhat optimistic views which they at present hold about the abdominal operation. That early cases of cancer of the uterus can be cured by operation is now an ascertained fact, and that the principle in cases of malignant disease of removing the affected area and the glands in connexion with it as widely as possible is a sound one will be accepted by all surgeons. If this be so then it seems almost certain that the balance of opinion will tend in a greater and greater degree in the future towards the more extensive and complete abdominal operation.

During the past year some very interesting statistical studies upon the frequency of the occurrence of cancer have been published by Professor DE BOVIS of the Reims School of Medicine. Amongst some of the conclusions arrived at are that while the frequency of cancer of the rectum remains stationary, that of cancer of the mamma and of the uterus shows a definite decline, and that the increase of cancer on the whole is mainly due to the greater number of deaths caused by visceral cancer. Recent statistics show an apparent increase of cancer in the male sex much greater than that in the female sex. This decreasing ratio of cases of female cancer is attributed by Professor DE BOVIS to the fact that male cancer is more frequently inaccessible to surgical interference and that the increase is more apparent than real. In England, however, at the present time there is still an increase of the death-rate from cancer in the female at all ages. Professor DE BOVIS's studies of this subject lead him to think that the alarmist views so prevalent upon this matter are exaggerated and out of all proportion to the actual increase of cancer, which, though real, is yet but small in amount.

### *The Treatment of Puerperal Infection.*

The surgical treatment of puerperal infection was one of the matters discussed at the Congress at Rome and valuable papers upon the subject were contributed by TUFFIER, LEOPOLD, FREUND, and TREUB. The general conclusions arrived at were that while certain pathological conditions existed, such as acute septic metritis and gangrene of the uterus, in which extirpation of the uterus might be regarded as likely to be of avail, yet the difficulties of accurately recognising such cases clinically were very great. Removal of the uterus was not called for in the great majority of cases of puerperal infection and in such cases was not likely to be of the least service in cutting short the progress of the disease. Professor LEOPOLD, however, held out the hope that in the future something might be done in the direction of the removal of thrombosed veins which contain septic clots, so avoiding the danger of general infection from these local foci.

### *Cæsarean Section.*

In the Obstetrical and Gynæcological Section at the meeting of the British Medical Association at Manchester a discussion upon this subject was opened by Dr. A. L. GALABIN. He thought that the conclusions were established that in all cases Cæsarean section should be advised in the place of embryotomy, provided that the decision could be made before labour or early in labour, that the patient had not been exposed to sepsis, and that a skilled operator was available. He did not think, however, that it would ever be possible to avoid the performance of embryotomy in cases where, for instance, the patients were exhausted by prolonged labour and where the maintenance of aseptic conditions was doubtful. As a first choice he preferred Cæsarean section to symphysiotomy, but he thought that there was a class of cases in which symphysiotomy had not been sufficiently practised in this country—viz., in cases of contracted pelves with a conjugate diameter of three inches and upwards, where with a living child forceps delivery had been tried and had failed. He finally urged that the time had come when the scope of the operation of Cæsarean section could be further extended in the treatment of labour complicated by a contracted pelvis, but that extreme caution was necessary in its application to cases of ante-partum hæmorrhage or eclampsia. Professor MURDOCH CAMERON in some remarks upon 50 cases of Cæsarean section was inclined to limit the operation to cases of contracted pelves with a conjugate diameter of two and three-quarter inches. He had had ten deaths amongst his 50 cases. Dr. MUNRO KERR in a paper upon the advantages and disadvantages of Fritsch's fundal incision concluded that the anterior longitudinal incision was the best for routine practice but that where the uterus was to be removed subsequently to the extraction of the child the fundal incision was preferable, as it allowed the child to be extracted more readily.

### *The Journal of Obstetrics and Gynæcology.*

One of the most important events of the past year has been the appearance of the new *Journal of Obstetrics and Gynæcology of the British Empire*. The journal, the first number of which appeared last January, is edited by Mr. ALBAN DORAN who has associated with him Professor JAPP SINCLAIR, Professor FREDERICK WILLIAM KIDD, and Dr. BERRY HART. This addition to medical literature bids fair to be a great success. Besides original articles, of which many of great value have already appeared, each number contains a critical review upon some special subject and an excellent summary of current obstetrical and gynæcological literature.

### *Fibromyomata of the Uterus.*

Fibroid tumours of the uterus continue to excite a large amount of interest. Mr. ALBAN DORAN has dealt with these tumours in his Harveian Lecture of the year and Mrs. SCHARLIEB and Dr. CULLINGWORTH have written valuable papers upon them. Mrs. SCHARLIEB's paper was entitled "An Analysis of 100 Cases of Fibromyomata Uteri, with Special Reference to their Degenerations and Complications," and was suggested by Dr. CULLINGWORTH's paper, which was called "An Analysis of 100 Cases of Uterine Fibromyoma in which the Condition of the Tumours and the Complications to which they had given rise were verified by Operation."

### *Dilatation of the Cervix.*

Evidence continues to accumulate with regard to the value of Bossi's dilator. Professor LEOPOLD has published a further series of cases, making a total of 17 cases in which he has employed this instrument. 12 of the patients were suffering from eclampsia and of the remainder two had contracted pelves, one advanced phthisis, one marked uterine spasm, and one was in labour with high fever. Of the 12 cases of eclampsia—10 in primiparæ and two in multiparæ—all the mothers recovered. Of the children seven were delivered alive with forceps; of these, two died within one

hour from immaturity. In all the cases the cervical canal was dilated sufficiently to admit of the application of forceps in from 20 to 30 minutes and in no case did any laceration worth mentioning occur. At the commencement of the dilatation the external os varied in size from that of a farthing to that of a crownpiece. Professor LEOPOLD concludes that this dilator will be of the utmost value to the obstetrician in the treatment of cases of eclampsia.

## OPHTHALMOLOGY.

### *Obituary.*

In making a few comments upon the subject of ophthalmology we must first express our great regret at the death of Dr. DAVID LITTLE of Manchester, who was to have occupied the President's chair in the Section of Ophthalmology at the late meeting of the British Medical Association but who was compelled to relinquish all idea of attending the meetings owing to increasing infirmity. He was an accomplished and well-read surgeon, an extremely neat and dexterous operator, and a very pleasant and genial companion; the loss caused by his death will be long and deeply felt by his friends and patients alike. He was ably replaced by Dr. C. E. GLASCOTT in the chair the duties of which he was unable to fulfil. We may also allude to the deaths of M. DESPAGNET and of M. E. MEYER, both well-known French surgeons, and also to that of M. RICHARD FORSTER who died at Breslau and whose name is associated with perimetry and with the photometry of the eye.

### *Examination of the Vision of School Children.*

One of the most important events of the year in this department was the appointment in the spring of eight ophthalmic surgeons by the School Board of London, who were directed to visit the schools and to test the vision of the children. Upwards of 17,000 children were examined, with the result that about 8 per cent. of the boys and 11 per cent. of the girls in all the standards were found to have seriously impaired vision. The visitation of these schools is of importance as an indication of the public feeling in regard to the hygiene of the young and to the adoption of measures for the prevention of disease rather than for the cure of it. The difficulties attendant upon such inquiries are very great, but it is obvious that the information to be gained will enable the School Board to give directions in regard to the nature and amount of the work requiring close attention to be done which will ultimately prove of great service to the community. The influence of close attention whether in reading or writing or sewing in the production of myopia, the rate of advance in that condition and its relation to more deeply situated disease of the tunics of the eye, the etiology of astigmatism, and many other conditions will in process of time be ascertained and evil effects will be guarded against or, if possible, abolished.

### *Myopia.*

Though it does not appear to have been made the subject of inquiry the question of the sufficiency and wholesomeness of the diet of children in schools will certainly have to be considered, for there is strong reason to believe that insufficient aliment is a potent factor in the production of myopia. Some valuable observations on this affection have been made in Professor MAGNUS'S Eye Hospital in Breslau by Dr. E. GUTTMANN and statistical tables are given in an article he has published showing that high degrees of myopia—that is, exceeding six dioptres—constitute 27 per cent. of all myopes in that district and just over 2 per cent. of all affections of the eye. The difference between the sexes was striking, the proportion in every 100 myopes being 36 males to 64 females, the higher grades also occurring chiefly in women. In his opinion this defect, from whatever other cause it may arise, is not essentially due to work requiring close attention unless this is practised at a very early period of life, for he found that only one-fourth of all the cases were met with in those who from their fifteenth year were compelled to work at near objects. In two-thirds of the cases there was no evidence of hereditary predisposition. The views of Dr. GUTTMANN are supported by those of Dr. J. E. WIDMARK of Stockholm, who maintains that neither the accommodation nor the convergence of the eyes required for near work is chiefly answerable for myopia. He regards this affection as mainly due to hyperæmia of the fundus, which leads to softening and yielding of the tunics. The hyperæmia is itself the result of over-use, as is shown by the frequency with which myopia supervenes in one eye when the other is impaired by a corneal opacity. He considers that an additional factor is to be found in the accumulation of the products of fatigue.

The question of the propriety of operating for the removal of the lens in high myopia has again been discussed by Dr. ADOLPH BRONNER and by Sir W. J. COLLINS, the former of whom has published the results he has obtained in 40 cases. As it is certain that in a considerable proportion of such cases, if left to themselves, the vision would ultimately become seriously impaired or altogether lost by detachment of the retina, the improvement of vision in the great majority of the cases after operation and the arrest of the myopia in nearly all must be set against the occasional failure of the removal of the lens. Whether this should be accomplished by discission or, as Dr. VOIGHT recommends, by extraction, is at present a moot point. In whichever way the operation is performed it is advisable that the two eyes should be operated on consecutively and not simultaneously. The retino-choroiditis which so often accompanies myopia has been the subject of careful microscopical examination by Dr. M. SALZMANN.

### *Various Lesions of the Eye.*

Records of some remarkable cases of dislocation of the eyeball have been brought before the Ophthalmological Society of Great Britain. In one case of accident reported by Mr. H. C. BALDWIN the globe projected between the lids, yet by gentle taxis it was reduced and fortunately for the patient without impairment of vision. Dislocation of the globe has also been reported on more than one occasion as the result of the application of forceps in cases of difficult delivery; attempts to reduce it should always be made. An opportunity of examining after death an eye lost by sympathetic ophthalmia has been taken advantage of by Dr. J. ASAYAMA of Kioto, Japan, who has given a careful and instructive description of the microscopical characters of the several tissues. A valuable paper has been written by Dr. CASEY WOOD on Primary Sarcoma of the Iris to which only reference can be made.

The consequences of lesions of the retina resulting from direct injury have been followed out by Mr. J. HERBERT PARSONS in monkeys, and his observations are interesting as showing that peripherally to the injury which was inflicted by traversing the eyes with a Graefe's knife the ganglion cells are diminished in number; that the fibres which undergo degeneration in the optic nerve retain the same position along the whole course of the nerve; and that there are invariably some degenerated fibres in both optic nerves and both optic tracts as well as in a wide area including the external geniculate body, the optic thalamus, and the anterior corpus quadrigeminum.

The Rarer Forms of Optic Atrophy were discussed at the Manchester meeting and a large number of causes of this condition were mentioned by different speakers. Thus, besides atrophy following neuritis, that consequent on intracranial growth, that found in tabes, and the forms occurring in Bright's disease, in glaucoma, in injuries to the optic nerve, in disseminated sclerosis, in diabetes, in

anæmia, and from the action of poisons were dwelt upon by different speakers.

Temporary Loss of Vision in one or both eyes was the subject of a paper by Mr. R. MARCUS GUNN, several examples of which had come under his care. The conclusion at which he arrived was that in most cases there is a temporary or complete loss of the power of conduction of an unknown nature between the lower or middle visual centres and the highest conscient centres. It does not, however, seem improbable that it is attributable to a vaso-motor reflex action leading to temporary occlusion of the retinal vessels. Various vaso-motor disturbances of the eyes impairing vision have been carefully observed and described by Dr. SAMUEL LODGE.

The subject of Ptosis has been treated with great fulness by Dr. WILBRAND and Dr. SAENGER who have shown the intimate relations that this physical sign has with many forms of disease of the system at large and of the nervous system in particular.

The French Ophthalmological Society was much exercised in one of its sittings (Oct. 14th) with the subject of spring conjunctivitis with papillæ or vegetations. M. TERSON, who brought the subject forward, considered it to be a disease induced by a special microbe which, however, has not as yet been isolated. With this view several members agreed, but M. GALEZOWSKI attributed the affection in many instances to alterations in the lacrymal passages. Excision of the granules, scarification, electrolysis, actual cautery, ointments containing salicylic acid and other topical remedies, and the internal administration of iodine, cod-liver oil, arsenic, and adrenalin, with residence in mountain air, have been advocated by other speakers and serve to show that the disease is both frequent and rebellious to treatment. Hitherto the secretory nerve of the lacrymal gland has been held to be the fifth, but Mr. PARSONS has adduced cogent evidence to show that the seventh is really the active nerve.

*Colour Blindness.*

The necessity for the use of colour names in a test for colour blindness has been strongly insisted on by Dr. F. W. EDRIDGE-GREEN in a paper read before the Ophthalmological Society, his argument being that there are two classes of colour-blind, in one of which the subjects are not able to see certain rays of the spectrum because their spectrum is shortened at one or both ends, so that on being shown a red light the patients may declare that there is no light visible; whilst the other class includes those who make mistakes because they are not able to recognise the difference between the colours which is evident to normal-sighted persons. The former are easily recognisable and on trial at once demonstrate their incapacity; the latter only require attention. With regard to the second class it is to be observed that the normal-sighted perceive six colours or are hexachromic, those with defective vision may see only five colours or are pentachromic, others see only four and are tetrachromic, but the mistakes of these are unimportant. The trichromic and dichromic members of the second class alone require to be rejected in applying for responsible posts where good colour vision for red or green is required since they are apt to confuse these colours.

*Instruments for the Detection and Extraction of Iron Fragments in the Eye.*

A new instrument has been brought into notice by Dr. J. E. WIDMARK, devised by Dr. MARTIN JANSSON and named by him the siderophone, which promises to be of value in determining the position of iron fragments in the globe of the eye. It is so constructed, on the principle of Hughes's induction scales, that two electric currents running in different directions are formed which meet in a telephone. If these are of equal strength no sound is heard, but if one end of the instrument is approximated to the smallest fragment of iron the current is increased in the corresponding half and a sound is heard in the instrument. According to Dr. JANSSON'S estimate, a splinter of iron weighing 0·001 of a gramme can be discovered at a distance of 2·3 millimetres and one weighing 0·01 of a gramme at a distance of 15·18 millimetres. Mr. A. FERGUSON MACCALLAN has collected a considerable number of cases showing the value of Haab's magnet in the extraction of particles of iron from the eye that have occurred in the London Hospital and has pointed out the much greater difficulty and danger of extracting such particles when they have penetrated the vitreous than when they are only located in the anterior chamber or imbedded in the iris. Dr. S. BARKAN of San Francisco reports similar successful cases in which Professor HIRSCHBERG'S new and powerful magnet was employed. This form of magnet, which weighs only four pounds and four ounces, can support a weight at one pole, which is conical, of more than 30 pounds.

## FORENSIC MEDICINE.

*Radcliffe v. Price.*

Since our last summary several actions have been tried in which medical men have appeared in one capacity or another. RADCLIFFE v. PRICE was a case heard in the High Court in which the defendant, the family physician of the late Mrs. DOWLING, was sued by the trustees of her estate to refund certain sums of money which he had received as gifts and not as remuneration for professional services. It was not alleged that Dr. A. F. PRICE had obtained the money (£800) by illegal means, but the gifts were disputed on the ground that they were not valid in law in consequence of the privacy with which they were received during the later part of the lifetime of the deceased lady. We commented at the time on the propriety of a third person being present or consulted whenever a patient proposes to hand over substantial sums as a donation to his or her medical attendant. Apart from the binding obligations of the law it is desirable that a medical man should not lay himself open to suspicion of "undue influence." Whilst Dr. PRICE was fully absolved by the court on legal, moral, and professional grounds he was ordered to refund to the estate of the deceased the amount of the claim.

*The Action against Dr. W. T. Law.*

Dr. W. T. LAW, who had professionally attended Miss FORSYTHE, a nurse, has sustained the anxiety of a trial. The action was one for damages in which the defendant was accused of using sedative drugs in inordinate doses over a protracted period, of procuring drugs for Miss FORSYTHE, and negligently placing them within her reach. Dr. LAW lavished both time and service in ministering to the plaintiff and for no other reward than the consciousness of doing what was evidently in her best interests. Although the verdict was in his favour the mental distress consequent on having to fight for his professional honour must have been a heavy strain. The expression of sympathy extended to him by his medical brethren was a splendid tribute of the esteem in which he is held.

*The Cathcart Case.*

What for a long time had been known as the CATHCART case reached what we may hope was the final stage of a strange forensic history. Some years ago a jury impanelled to inquire into the mental condition of Mrs. CATHCART gave a verdict attesting her sanity, and that, too, in face of the strongest medical evidence to the contrary. Free from restraint upon her estate and person she entered upon the most senseless, prolonged, and costly litigation, and finally found herself in Holloway prison for contempt of court, which she persistently refused to purge. A second investigation was held before a judge and jury with the result that in future the poor victim of recurrent delusional insanity will be protected against herself.

*Fees of Medical Witnesses.*

An interesting case bearing on the question of the fees of medical witnesses was decided at the New Mills county court. Dr. G. LORIMER of Burton sued for payment of his account in which he charged five guineas for preparing his case and five guineas per diem for attendance at the High Court. We were glad to find that he was awarded the full amount of the claim with costs.

*Keeping Certifiable Lunatics without a Licence.*

At the North London Police-court SARAH ROACH was fined £25 for having kept at the Alexandra Nursing Home without a licence two certifiable lunatics. There were nine other patients under her care. We subscribed to the decision of the magistrate which brought into strong light the necessity of protecting the public against the possibility of the freedom and well-being of individuals but little able, from senility or other causes, to take care of themselves being jeopardised.

*The Penruddocke Case.*

Quite recently Mrs. PENRUDDOCKE, a lady of high social position, was prosecuted at the Old Bailey by the National Society for the Prevention of Cruelty to Children. The indictment, which included several counts, charged her with having caused unnecessary suffering to her little girl, aged six years. The child, it appeared, was troubled with enuresis. Numerous acts of cruelty were deposed to which could not by any stretch of the imagination be considered as proper corrective treatment for the affliction. The prisoner was found guilty on a minor count and was fined £50. Together with many of our contemporaries we had to express the opinion that the jury leaned to the side of mercy in their verdict. Mr. Justice BIGHAM, who tried the case, regretted that they had been "constrained" to return a finding adverse to the accused. The lenient punishment which he inflicted was strongly animadverted upon by a large section of the public

*Criminal Abortion.*

There have been comparatively few charges during the year of procuring criminal abortion. The most remarkable was the case of WILLIAM HOLLIS, a quack and herbalist who had a striking career of crime. 30 years ago he was awarded 10 years' penal servitude. Subsequently he was condemned to death for a repetition of the offence but the sentence was commuted to life-long imprisonment. Given his liberty 20 years later he once more resorted to his nefarious practices and for this Mr. Justice WRIGHT gave him another life sentence.

*Baby-farming.*

Baby-farming seems to have been more rife than ever. We have thought it incumbent upon us to advocate both registration and inspection of all children put out to nurse for gain, and further that all the contracting parties, including the parents of the children, should be included in the registration.

*Crime in General Paralysis of the Insane.*

As regards crime in general paralysis of the insane an instructive communication was made in the *Journal of Mental Science* by Dr. W. C. SULLIVAN who found by investigation of a large number of cases that as compared with alcoholic crimes where homicide, suicide, and sexual offences predominated, the crimes of the general paralytic were mostly those of acquisitiveness prompted by optimistic ideas.

*Asphyxia from Pressure on the Chest.*

Two interesting cases of asphyxia from pressure on the chest have been recorded, one in THE LANCET of Jan. 25th (p. 245) and the other by Dr. BEACH and Dr. FARRER COBB in the *Boston Medical and Surgical Journal*. In the former there was a peculiar mottled dusky-bluish hue of the skin which did not disappear on pressure. The cause of this was shown to be stasis of hypervenous blood in the dilated capillaries.

*Poisoning by Illuminating Gas.*

Chronic poisoning by illuminating gas has been carefully studied by Dr. J. C. BAYLEY of New York. He found that the prominent symptoms were anæmia, albuminuria, and occasionally enlargement of the spleen causing a simulation of malaria. The patients improved or quite recovered on being removed to a pure atmosphere. The poisoning was caused by gas having leaked slowly from mains and service pipes, sometimes in such small quantity as to give no warning by the smell. Dr. J. T. YARROW, jun., has described similar cases. In two cases he detected carbonyl hæmaglobin in the blood and in one case in the urine. It is noteworthy that coal-gas contains 7 per cent. of carbon monoxide and recently manufactured water-gas (New York illuminating gas) from 30 to 45 per cent.

*"Poisonous Stoves."*

Several instances of death from the vapour given off by "poisonous stoves" have been chronicled, that of M. ZOLA being the most notable. At Bayswater one man lost his life and another was seriously affected. They slept in a room the chimney of which received the products of combustion, complete and incomplete, of a stove outside. The most potent factors were no doubt acetylene and carbon monoxide. At Wakefield two girls were overcome by the fumes emanating from a geyser in a bathroom.

*Poisoning by Methyl Alcohol.*

Dr. R. HUNT in the *Johns Hopkins Hospital Bulletin* has recorded some valuable observations on poisoning by methyl alcohol. The coma due to ethyl alcohol is as a rule of not more than six hours' duration, never lasting more than 24 hours, whilst in the case of methyl alcohol it may persist for two, three, or even four days. Methyl alcohol is retained longer in the nerve tissues and is thus cumulative. In experiments on animals degeneration of the optic nerve and blindness were observed in fatal cases. Professor WÜRDERMANN has published in *American Medicine* two cases of poisoning by the inhalation of the fumes of methyl alcohol. The symptoms were frontal headache, dizziness, and nausea, followed by loss of sight. He found that the prognosis of toxic amblyopia the result of methyl alcohol was worse than when it was due to ordinary alcohol or to tobacco.

*Carbon Bisulphide.*

Dr. D. GILBERT of the Belgian Inspection du Travail has investigated the effects of the vapour of carbon bisulphide in connexion with the industry of vulcanising indiarubber.

*Poisoning by Acetanilide.*

In the *American Journal of the Medical Sciences* Dr. P. KING BROWN has recorded a death from poisoning by acetanilide (antifebrin). Six powders each containing 10 grains were taken in a few hours. The symptoms were delirium, headache, pyrexia, rapid action of the heart, slight jaundice, nausea and vomiting, bloody motions, urine dark red and later nearly black from the presence of hæmatoporphyrin, and finally suppression of urine. Death occurred after several days.

*The Cutaneous Absorption of Aniline.*

In the *Archives Générales de Médecine* Dr. G. BROUARDEL of Paris has drawn attention to cases of poisoning from the cutaneous absorption of aniline. No deaths occurred. The aniline was contained in a boot blacking in the proportion of 90 per cent. Control experiments on rabbits and guinea-pigs furnished corroborative evidence of the facts observed in the human subject, in which the symptoms appeared in from one to four hours.

*Ice-creams.*

The London County Council General Powers Act, which came in force on Nov. 1st, 1902, is calculated to diminish the number of cases of poisoning by ice-creams. Long

ago THE LANCET issued a special Commission to inquire into the insanitary condition of the Italian quarter, the head centre of ice-cream manufacture.

*Ptomaine Poisoning.*

Ptomaine poisoning has claimed several victims. The most noteworthy instances were those which resulted from eating pork pies purchased from a Derby firm. In all 130 eople were more or less affected. Professor DELÉPINE, who conducted the bacteriological investigations, found a colon bacillus in the pies. A culture of this injected into some animals killed them. There was neither bad taste nor smell in the pies. The bacillus seems to have been derived from the large intestines of pigs which were prepared for sale in close proximity to the place where the pies were made. Our comment on this case was "the necessity for the compulsory institution of public abattoirs."

## DENTAL SURGERY.

*Papers.*

Under the title of "Is the Symmetrical Extraction of the First Permanent Molars Justifiable?" Mr. ELOF FORBERG of Stockholm has reviewed the many objections to the removal of these teeth for the relief of crowding. Since the time when symmetrical removal of the first molars was advocated and carried out somewhat extensively the methods of saving teeth have undergone a marked improvement, with the result that views on the subject have been modified. The results which followed from symmetrical extraction were often undoubtedly good and even now the treatment is an excellent one to pursue in certain conditions.

Several communications have been published on Pyorrhœa Alveolaris, one of the most interesting being by Mr. KENNETH W. GOADBY. He states that he has often found yeasts in the small masses of tissue adhering to the apices of teeth extracted in cases of suppurative gingival periodontitis (pyorrhœa alveolaris), but as yet they have not been inoculated into animals. Culturally they appear to correspond to the yeasts found in the so-called chronic abscesses. In the later stages of the disease he states that it is rare to find many cocci; bacilli of various kinds and a good number of threads are usually present, many of the later showing a tendency to stain irregularly and in patches. He described one organism which he thought may possibly have some causal relation to pyorrhœa alveolaris. It is a coccus not hitherto described. The coccus is found in the pulp chambers of teeth which are the seat of septic apical periodontitis and are also present in cases of acute oral suppuration. The subject of Oral Sepsis and its Relation to General Disease was discussed by Mr. J. F. COLYER in a paper read at the annual general meeting of the British Dental Association. He referred to several interesting cases of gastric ulcer in which marked improvement followed treatment of the teeth and he pointed out the constant relationship which existed between oral sepsis and conditions familiarly known as general debility. He urged the importance of more accurate accounts being recorded of the condition of the teeth in cases in which septic absorption was suspected, and he pointed out that much more work, clinical, chemical, and bacteriological, was required before a correct idea of the relationship of oral sepsis to general disease could be determined. A paper by Dr. A. LOGAN TURNER on Some Points in the Anatomy of the Antrum of Highmore is worthy of notice. Attention is directed to the frequent occurrence of an accessory opening. It is situated posterior to, and on a lower level than, the normal opening and its situation explains those cases in which pus from antral suppuration drains mainly backwards into the naso-pharynx and, indeed, may never appear at the anterior nares. The dangers of too energetic syringing were referred to and cases were recorded in which an infection of the frontal sinus had resulted from this cause.

A paper on the Influence of Mastication on the Jaws and their Appendages has been read before the Odontological Society of Great Britain by Dr. HARRY CAMPBELL. The important part played by muscular contraction in the formation of the nasal fossa was clearly shown. It was pointed out that the effect of rhythmic contraction of the masticatory muscles was to accelerate the flow of blood and lymph in the jaws and all the accessory and neighbouring parts. Dr. CAMPBELL referred fully to the type of palate at times found in those suffering from nasal obstruction and described what in his opinion were the chief factors operating to produce the deformity. His conclusions are open to criticism and he does not appear to have taken into account the important part played by the order of the eruption of the teeth in producing many of the deformed arches. Mr. W. ARBUTHNOT LANE in a contribution to the *British Medical Journal* on the Value of Respiratory Exercises on the Naso-pharyngeal Lesions of Children, has also referred to the question of deformed arches. The views of Mr LANE, like those of Dr. CAMPBELL, are open to criticism, but this does not detract from the value of the papers which should be the means of stimulating others to investigate these interesting subjects. Mr. MAYO COLLIER has also published a paper in THE LANCET[1] on Nasal Obstruction and Deformities of the Upper Jaw, Teeth, and Palate. Illustrations are given of three types of deformed arches which he considers are commonly associated with obstructed nasal respiration: the first deformity is known as "open bite," the second as "inferior protrusion," and the third as "superior protrusion." These types of deformed arches are constantly met with in dental practice and in many instances there is not the slightest reason to believe that they have been produced by nasal obstruction.

Cases of Composite Odontomes have been recorded by Mr. C. W. GLASSINGTON and Mr. W. H. DOLAMORE. That recorded by the latter occurred in the mandible on the right side and is one of the largest yet described in this situation. The measurements were: length 4·2 centimetres, depth 2·8 centimetres, and width 1·6 centimetres. The weight was 24·5 grammes. The capsule came away with the solid portion of the tumour and so allowed a microscopical section to be made showing the mode of growth of the odontome. Under the title of "An Anomalous Tumour from the Antrum" Mr. J. BLAND-SUTTON has described a curious tumour which occupied the right antrum and caused considerable bulging of the facial portion of the maxilla in a girl, aged 11 years. The tumour was composed of soft muscular tissue containing a large quantity of pieces of bone to the number of 500. The tumour probably belongs to that rare category of growths known as "compound follicular odontomes." In a paper on the Clinical and Chemical Study of a Case of Dental Erosion, in *Items of Interest*, July, 1902, Dr. E. C. KIRK refers to the importance of studying the condition of the saliva in cases of dental disease. M. MICHAELS of Paris is working in this direction and the extended study of the saliva will no doubt do much to assist in the elucidation of many of the pathological conditions of the teeth. Papers of interest have also appeared on the Pathology of Certain Growths about the Lower Jaw, by Mr. J. H. TARGETT; a *résumé* of the Histology of the Dental Pulp, by Mr. F. A. LATHAM; and a series of papers on the Etiology of Irregularities of the Teeth, by Dr. J. SIM WALLACE. The *Dental Review* has also during the year published biographical sketches of dental practitioners living in the beginning of the last century.

*Operative Dentistry.*

Advance in operative dentistry has been made in the

[1] THE LANCET, Oct. 18th, 1902, p. 1038.

methods of producing porcelain inlays and in the methods of preparing and inserting other filling materials. The principle usually known as "extension for prevention" in the preparation of cavities has been ardently advocated by practitioners, more especially in America. The method is based on the present knowledge of caries and there is little doubt that, if cavities are prepared with self-cleansing edges and the cervical margins are cut below the gum margins and the cavities are filled with care, the teeth will be preserved in a more efficient way than was the case by the methods hitherto advocated and adopted. In the direction of anæsthetics the method of prolonging nitrous oxide anæsthesia has been received with increased favour. A new drug, by name "somnoform," has also been placed on trial and shows signs of being a valuable addition to the group of anæsthetics.

*New Books.*

A few new books have been published. Mr. D. P. GABELL and Mr. HAROLD AUSTEN have written a useful book on "Materia Medica, Pharmacology, and Therapeutics for the Use of Dental Students and Practitioners." A book entitled "Notes on Medicine for Medical and Dental Students" has appeared from the pen of Mr. W. DE B. WOODBURN. Mr. A. S. UNDERWOOD'S "Aids to Dental Anatomy and Physiology" and Dr. SIM WALLACE'S "Cause and Prevention of Decay in Teeth" have reached their second editions and the issue of a new edition of Dr. JULIUS SCHEFF'S excellent work, "Handbuch der Zahnheilkunde," has been commenced.

*Obituary.*

The death of Mr. ALFRED COLEMAN at the age of 74 years has removed one of the few remaining dental surgeons who were actively concerned with the reform movement which led to the creation of dentistry as a profession. For many years he was dental surgeon and lecturer on dental surgery to St. Bartholomew's Hospital and he also held similar posts at the Dental Hospital of London. His contributions to dental literature were numerous and added much to the knowledge of the pathology of the teeth. In anæsthesia he always took a great interest and he did much to improve the methods of administering nitrous oxide. Mr. WILLIAM HEADRIDGE of Manchester, who died at the age of 67 years, was one of the founders of the Victoria Dental Hospital, Manchester, and of the Manchester Odontological Society. Mr. H. G. READ, who died in October, was for many years assistant dental surgeon to St. Bartholomew's Hospital and dental surgeon to the National Dental Hospital. Dr. JAMES COWAN WOODBURN of Glasgow, who died in the early part of this month at the age of 62, was for many years officially connected with the Dental Hospital of Glasgow. He was an examiner in dental surgery for the Faculty of Physicians and Surgeons and held for a long period the post of surgeon to the Glasgow Yeomanry and to the Royal Naval Artillery Volunteers. The deaths of Mr. NATHANIEL TRACY of Ipswich and of Mr. FRANCIS ROGERS of Winchester have also to be recorded, as also that of Mr. R. P. LENNOX, a man possessed of great mechanical ingenuity and one who contributed materially to the advance of prosthetic dentistry.

## ANATOMY AND PHYSIOLOGY.

*Growth of Biological Research.*

The activity with which biological research is pursued at the present time is sufficiently attested by the multiplication of societies and journals devoted to various branches of this subject and by the remarkable increase in the volume of those that have been long established. To take one example only. PFLÜGER'S *Archiv für Physiologie*, which was originally published in monthly parts, making up an annual volume of moderate size, is now so overwhelmed with original articles on pure physiology that three volumes scarcely enable it to publish all the contributions that it receives, and it by no means stands alone as an exponent of modern physiological research. In a similar manner bacteriology has quite recently detached itself from microscopy and has for some time assumed a separate existence, having journals of its own; and now a new branch of work has rapidly risen to occupy an important place in research, having experts and special processes that are proving themselves to be of immense value in enabling us to recognise and to comprehend the minute structure of the tissues of which the body is composed, which consists in the art of preparing, staining, and mounting sections. Various excellent treatises on this subject have been from time to time noticed in these columns, but many who have not had the opportunity of following the advance of science in this direction will be surprised to learn that a "Treatise on Microscopical Technic" has just been published, the first instalment of which, embracing about half the alphabet, is a goodly volume of 800 pages. On the title-page of this work appear the well-known names of EHRLICH, WEIGERT, KRAUSE, MOSSE, and ROSIN, which are sufficient guarantees of its completeness and accuracy.

*Physiological Chemistry.*

But whilst the application of the methods of double and triple staining has greatly extended our knowledge of the visible structure of the tissues the physiological chemist has not been idle in his endeavours to elucidate the more recondite processes which the constituents of the few great groups of alimentary substances undergo in traversing the fine but perceptible line which separates living from non-living bodies. The proteid substances in particular have received an extraordinary amount of attention. Their composition has been carefully investigated, their relation to each other and to the normal and abnormal constituents of the secretions and tissues has been studied, and bodies that formerly were isolated and possessed little interest have been shown to be closely connected with long-recognised but not more important bodies. Thus groups come to be formed and the comprehension of the whole series of processes taking place in the animal and plant body is greatly facilitated. No better example could be given than the group of purin bodies. These, which include xanthin, hypoxanthin, guanin, adenin, and the alloxuric bodies generally, are all associated with each other by what has been termed the purin ring, composed of two urea radicles linked together by a central chain of three carbon atoms, but differing from one another according to the nature and position of the various side chains which are tacked on to this ring. The interest that attaches to them is the intimate relation they have with uric acid, through this with urea, and so with the final stages of the disintegration of the proteid substances.

*Investigations on Digestion.*

Another and equally interesting line of research has been carried out by Professor PAWLOW and his assistants and pupils in the St. Petersburg Laboratory, which, he complains, is starved on a few thousands per annum whilst millions are spent or wasted on preparations for war. His ingenious experiments, which have now extended over many years, have been directed chiefly to gastric and duodenal digestion, to the secretion of the gastric, hepatic, and pancreatic glands, and their several actions on the chief constituents of the food. He has shown that mentally perceived or psychic stimuli (sight and smell) start the process of digestion and that these stimuli are conducted to the stomach by the vagus nerves, that the quantity and quality of the active principles of each secretion are wonderfully adapted to the nature of the food, that the pancreatic secretion is easily arrested by pain in other parts of the body, and that one of the many obscure functions of the bile is to reinforce the action of the pancreatic enzymes. It is gratifying to know that in Professor PAWLOW'S opinion man in his ordinary diet has followed instinctively the laws of physiology. At dinner, for example, by the *hors d'œuvres* and small glass of liqueur the psychic stimulus is aroused; the

bouillon with vegetables and carbohydrates in abundance powerfully stimulates the glands of the stomach; whilst the more solid meats give both the gastric and pancreatic secretions material appropriate for their action. The final sweets terminate the meal with a pleasant sensation without adding to the burden of digestive action.

If the statements of M. NENCKI and N. O. SIEBER are substantiated by other chemists it would appear that pepsin is highly complex in its constitution, its giant-molecule splitting up into nucleo-proteid, albumose, lecithin, and hydrochloric acid. The triple action exerted by the preparations of pepsin—namely, the digestion of albumin, the coagulation of milk, and the power of precipitating plasmine from concentrated solutions of albumin, each of which may be intensified or diminished—points also to the complex nature of the pepsin molecule. Pepsin is not a nucleo-proteid, for it can be obtained perfectly free from phosphorus, and it appears to be an albumin containing about 1 part in 200 of chlorine. Whilst Professor PAWLOW considers that the contact of acid chyme with the papilla on which the duct of Wirsung opens occasions the secretion of pancreatic juice by reflex action through the ganglia in the coats of the intestine, Messrs. W. M. BAYLISS and E. H. STARLING hold that a powerful incentive to the activity of the pancreas is a substance they have named secretin. This substance, preceded by the formation in the intestine of prosecretin, acts directly through the blood upon the gland cells of the pancreas. A new enzyme has also been discovered by COHNHEIM in the mucous membrane of the intestine in the dog. He has named it erepsin and as it possesses proteolytic powers it assists in breaking up albumin and casein in the infant and thus aids or replaces pepsin and trypsin. It seems probable that it is present in some plants and a reference may be made to an interesting communication recently delivered by Professor SIDNEY VINES to the Linnæan Society, in which he points out that a proteolytic enzyme analogous to trypsin and capable of digesting globulins and albumoses is very generally present in plants, whilst in some instances—as, for example, the tissues or juices of the pineapple, the fig, and the papaw—the power of peptonising the higher proteids, such as fibrin and the caseinogen of milk, is possessed.

### *The Number of Red Corpuscles in the Blood in High Altitudes.*

The rapid augmentation in the number of the red corpuscles of the blood resulting from residence in high altitudes and exposure to rarefied air, which has been accepted by some physiologists, has been rendered more than doubtful by the results of the observations of M. ARMAND DELILLE and M. ANDRÉ MAYER, who find that in the case of guinea-pigs the hyperglobulism is very rapid, occurring in the course of a few hours, and is neither constant nor proportional to the height attained, and further that it is partial, being noticeable only in the vessels of the extremities and not in those of the head, and similar results were obtained by Dr. E. ABDERHALDEN who experimented on rabbits and rats and who not only counted the corpuscles but determined the amount of hæmoglobin. An increase in the number of leucocytes in the blood has been observed after massage.

### *Persistence of Irritability in Muscular Tissue after Death.*

Evidence from various quarters has accumulated showing that the muscular tissue of mammals does not lose its irritability after death as soon as is generally supposed. Thus, Professor J. A. MACWILLIAM of Aberdeen finds that the arterial and venous walls preserve their contractility for a long period. Rigor mortis is established in the vessels very soon after their death or removal from the body and continues for a long time, but the carotid of the horse presents an appreciable amount of contraction on appropriate stimulation for as long a period as 14 days, or even in some cases 18 days, after death. Professor SERTOLI again has observed signs of excitability in the retractor penis of the horse five, six, or seven days after removal from the body. Even in the case of the heart, which is generally believed to lose its excitability very rapidly after excision or death, the experiments of Dr. KULIABKO of St. Petersburg show conclusively that, when apparently extinguished, the excitability can still be recovered by appropriate measures. In the case of the rabbit 40 hours or more, and in the case of a boy who had died from pneumonia 20 hours, after death artificial circulation of a fluid charged with oxygen for the space of 20 minutes through the cardiac vessels led to slow and feeble pulsations in the right auricle which gradually extended to the right ventricle and ultimately to the left ventricle, the whole heart then beating with tolerable regularity for an hour. Details of the procedure adopted are promised shortly and may prove of far-reaching importance in the treatment of some cases of sudden death from causes which are purely local in their action, as, for example, chloroform poisoning, and in laryngitis, drowning, or hanging.

### *Studies on the Brain.*

The cerebellum has been the subject of study by several physiologists. O. KOHNSTAMM, chiefly basing his conclusions on anatomical grounds, maintains that the cerebellum is adapted to enable sensations of all kinds, except those of the higher senses, to exert an influence on the motor apparatus of the organism; such sensations are those conveyed by centripetal paths from tendons, joints, and muscles, tactile sensations of the skin inducing movements and supplying the sense of position, the pain proceeding from abrasions of the skin and from exhausted muscles. In other words, it is an organ which can transfer sensory impressions to motor paths—hence the asthenia and ataxia in cerebellar lesions.

P. PEGANO'S experiments also point to the intimate relations of the cerebellum to the nervo-muscular apparatus PEGANO found that remarkable and strictly localised irritant effects on certain groups of muscles were produced by the injection of solutions of 1 per cent. of curara into particular regions of the cerebellum. Curious psychical effects occurred in some instances characterised by fear, anger, and pugnacity, whilst in one case ulceration of the cornea was observed a few hours after the lesion.

The weight of the brain inclosed in the dura mater has been carefully taken by F. MARCHAND in 1234 bodies of men and women in Saxony, with the results that the average weight of the brain in males between 15 and 50 years of age was 1400 grammes, and that of adult women 1275 grammes. Its final growth is completed in man at the age of 19 or 20 years and in woman between 16 and 18 years of age. Senile atrophy occurs in the eighth decade in man and in the seventh in woman with much individual variation.

### *Suprarenal Capsules.*

The active agent of the suprarenal capsules appears to have been at length isolated by J. TAKAMINE in the form of a crystalline substance of constant composition possessing an extraordinarily energetic vaso-motor power. It has a bitter taste and a feebly alkaline reaction.

### *New Instruments.*

Many new forms of instruments adapted to facilitate research have been devised. Thus, Professor T. G. BRODIE has constructed a new form of frog heart lever especially adapted for class work; M. POMPILIAN, a new myograph; H. POLE and T. TAMMES, new forms of electric microscope lamps; S. SPIEGEL, an automatic injection syringe; ALOIS KREIDL, an onychograph for registering the pulse through the nails; and Dr. V. HENRIQUES, a calorimeter.

*Lectures.*

The Harveian Oration was delivered before the Royal College of Physicians of London by Dr. DAVID FERRIER who took for his subject the Relations subsisting between the Nervous and Vascular Systems and described at considerable length the advances that have been made since the time of HARVEY in our knowledge of the innervation of the heart and of vaso-motor nerves and centres. The Huxley Lecture of the Anthropological Institute was read by Dr. D. J. CUNNINGHAM of Trinity College, Dublin, who discussed the subject of Right-handedness and was afterwards presented with the Huxley memorial medal. The Croonian Lecture was delivered before the Royal Society by Professor ARTHUR GAMGEE, who took for his subject Certain Chemical and Physical Properties of Hæmoglobin, pointing out that, like chlorophyll in plants, it is peculiar in the animal body in possessing a definite and unique physiological function, that it absorbed the ultra-violet rays of the solar spectrum, that both hæmatin and hæmin possessed intense ferro-magnetic properties, and that by electrolysis hæmoglobin could be separated in a colloidal but perfectly soluble form.

## ANÆSTHETICS.

The most important event of the year was undoubtedly the step taken by the Royal Colleges of Physicians of London and Surgeons of England in compelling medical students to obtain a practical knowledge of anæsthetics and their administration before admission to the final examination. As has been pointed out, the General Medical Council by not adopting anæsthetics as one of its schedule subjects has left the students who pass into the profession through portals other than these Royal Colleges free from any compulsion in the matter of anæsthetics. This anomaly will, we trust, cease to exist before we have to record the doings of another annus medicus.

*New Methods of Anæsthesia.*

Ethyl chloride, although called a "new anæsthetic" in several of the many papers which have been written upon it during the past year, was really described by FLOURENS 50 years ago. At the instance of DUMONT of Berne AUGUSTE LEBET undertook a very careful and thorough investigation into the physiological effects of this body. Pursuing this subject H. GIRARD[1] has given the result of a most exhaustive research upon chloride of ethyl. As the work of KOENIG, DUMONT, FOLLOSSON, and RUEGG is not well known in this country we may point out that GIRARD'S conclusions, which so far as they go are trustworthy, show that the physiological action of ethyl chloride resembles closely that of the other members of the ethyl series. In that it contains chlorine it is more of a protoplasm poison than the oxide. Its extreme volatility, however, invests it with advantages and drawbacks entirely its own. Thus it has to be given undiluted by air, a fact which may account for the fatality which LOTHEISSEN (Innsbruck) chronicles as occurring in the 2500 cases which he was able to collect. In this particular case the patient was in a feeble and debilitated condition. The rapidity of the action of the concentrated vapour in most persons minimises the pre-paralytic stage of excitement, although BRODTBECK, LOTHEISSEN, GIRES, and others have recorded, although rarely, marked excitement with noisy talking even when the patient was wholly unconscious. These phenomena were most marked in alcoholic and neuropathic patients. As the mucous membrane of the upper air-passages becomes rapidly anæsthetic it is claimed that reflex cardiac syncope does not occur as a result of ethyl chloride. However, GIRARD points out that reflex inhibition of respiration may supervene, although it rapidly disappears, and we are compelled, therefore, to regard his conclusion as to cardiac inhibition being always absent as at present open to further examination. Upon this point LEBET'S careful work on the ventricle of the frog deserves attention as well as the research of WOOD and CERNA.[2] The cumulative action of ethyl chloride prevents its employment for prolonged operations, at least for such as do not allow the alternate narcotising and recovery of the patient. The rapidity of the recovery renders it extremely difficult to prevent complete return to consciousness before the renewal of the inhalation. As far as our knowledge goes at present this anæsthetic appears at its best in brief operations. Thus F. H. ROSE[3] gives a most favourable report of its use in minor surgery and dentistry. Its rapid action, the speedy recovery of consciousness, and the absence of after-effects as well as its portability are, he thinks, its best qualities. Respiratory spasm, cyanosis, jactitation, and noisy struggling with muscular rigidity are, however, occasionally experienced. FROMAGET has used chloride of ethyl with satisfaction in ophthalmic practice and prefers it to chloroform and other anæsthetics for cases when cocaine is inadmissible. MALHERBE, also, whose experience extends over four years, has had no unpleasant effects in his practice. It would be outside the limits of the present article to describe the technique of its use. GIRARD'S paper furnishes ample directions. It may, however, be mentioned that Breuer's mask has by many surgeons been superseded by simpler contrivances. Indeed, as the only desideratum is a closely fitting inhaler with a small aperture for spraying in the anæsthetic no elaborate apparatus can be required and the simpler the appliance the better.

We have had occasion to utter a caution against the indiscriminate use of highly volatile anæsthetics and we may recur to this point as within the past year a number of proprietary articles bearing fancy names have been offered to the profession, and especially to the dental members of it. These are in most cases composed of either chloride of ethyl or this body mixed in different proportions with chloride of methyl. Some are useful, but it is clearly most undesirable that their true properties should not be known to those who employ them and that their true composition should be cloaked by the use of a misleading name. At the Congress of the French Association for the Advancement of Science at Ajaccio last year M. G. ROLLAND, a French dentist, announced his experience of a mixture of chloride of ethyl 60 parts, chloride of methyl 35 parts, and bromide of ethyl five parts, called by the name of somnoform. Dr. CHAMINADE[4] describes the solution and pronounces it superior to, and safer than, any of its individual constituents. In a very unconvincing paper by M. ROLLAND and Mr. F. FIELD ROBINSON[5] the physiological properties and actions of the anæsthetic are somewhat incompletely dealt with. In a pamphlet entitled "A Popular Teaching [*sic*] of the General Anæsthesia produced by Sæmnoform" M. ROLLAND, while altering the name "somnoform" to the still more useless title given above, does not carry our knowledge further. At present beyond the fact that this substance has in the hands of several dental practitioners proved useful, we are compelled to submit that it is better to regard somnoform as ethyl chloride diluted with other bodies the properties of which are as yet imperfectly known. We may mention a brief paper by M. M. MARCELLE and M. CH. RICHET on the action of methyl chloride which is of some interest in this connexion.[6] Passing to more sure ground we notice some important papers which have appeared dealing with chloroform and ether.

[1] Revue de Chirurgie, Nos. 10 and 11.

[2] The Dental Cosmos, July, 1902.

[3] Bristol Medico-Chirurgical Journal, March.

[4] Gazette Hebdomadaires de Sciences Médicales, January, 1902.

[5] Journal of the British Dental Association, 1902.

[6] Comptes Rendus Hebdomadaires de la Société de Biologie, No. 17, May 23rd, 1902.

Dr. H. BRAUN[7] gives the result of a most careful research upon mixtures of these anæsthetics. By experiment he arrives at the changes which take place in them during their evaporation. Thus the residues give a gradually increased proportion of chloroform. He comes to the conclusion that the only trustworthy way in which such mixtures can be given if their due proportion is to be maintained is to mix their vapours. He suggests the employment of two bottles of different sizes which contain chloroform in the smaller and ether in the larger. The plan is the same as TYRRELL'S two-bottle method—which BRAUN describes—but appears simpler in detail. In strong contrast are two papers, one by Dr. C. HOFMANN on Ether as the Routine Anæsthetic and the conduct of ether administration,[8] and the other by Professor KRÖNLEIN.[9] In the former HOFMANN contends that while ether is the safer anæsthetic, since chloroform is not devoid of danger even when given in carefully regulated doses and by experts, the use of ether is prejudiced by faulty administration. This includes the use of excessive quantities and the complication of anæsthesia with asphyxial factors. The prejudicial effects commonly ascribed to it—lung and other complications—he regards as being due not to ether but to infection and as such to be preventable. He advocates the employment of morphine given before the anæsthetic and the careful restriction of the quantity of ether by the use of a drop bottle. Professor KRÖNLEIN writes upon the removal of the upper jaw and makes the question of how the anæsthetic should be given not only a portion of the heading of his paper but devotes much attention to the subject. His view is that supported by NUSSBAUM, TRENDELENBURG, and E. ROSE—viz., that full, and not light, anæsthesia is the safest whether chloroform or ether be employed. He regards as groundless the fear that any blood which may enter the lungs during profound narcosis will set up septic processes. The discussion upon the accidents from chloroform held in the Société de Chirurgie[10] is chiefly interesting as embodying the views of the leading French surgeons upon this matter. Some of the speakers referred to deaths due, they thought, to no want of care but to unpreventable causes. M. BROUARDEL, speaking before the Académie de Médecine, describes the post mortem appearances in 25 cases of death from chloroform. He regards the mode of the administration as not the only factor in bringing about death—death attributable, M. BROUARDEL contends, to reflex stimuli by branches of the trigeminal and the superior and inferior laryngeal nerves. Individual susceptibility, he contends, plays an important rôle in producing the fatal result. Dr PONCET who took part in the discussion advocated ether. He submitted that pneumonia and other lung complications which occurred as a sequel of anæsthetisation whether by chloroform or ether, were infective in origin and not attributable to the anæsthetic.

Dr. W. H. GOOD,[11] to test the question of reflex inhibition under anæsthetics, undertook experiments. He found inhibition commonly occurred upon stimulation by strong vapours or even by mechanical excitants of the nasal mucous membrane. His experiments, of course, are simply confirmatory of those of physiologists and his recommendation as to treatment, forcible distension of the lungs, has been accepted by most persons, although, perhaps, not with any special knowledge as to how the procedure acts. But according to many authorities the danger of chloroform is not merely the one dealt with above. Infection through vomitus can be avoided, we are told, by pre-anæsthetic lavage, but CAIRD and others have pointed out in recent articles that this procedure is not free from danger. Collapse and syncope have occurred and the indiscriminate employment of lavage should, we agree, be avoided. Upon this subject a useful hint is given by CRENSHAW. He freezes the lower end of the indiarubber stomach-tube by means of ethyl chloride spray before passing it and finds this obviates spasm and gagging. How far anæsthetics act directly upon the blood and tissues has been discussed in several papers. Thus RENAUT[12] has found young animals die from chloroform, and in all cases besides the heart being in diastole he found direct action upon the renal epithelium. The convoluted tubes being affected the secretion of the organs must be seriously impaired.

Dr. C. J. MARTIN for Dr. EMBLEY of Melbourne communicated an important paper to the Society of Anæsthetists of London, a *résumé* of which appears in the proceedings of the Physiological Society. He deals with the causation of sudden death during the administration of chloroform. His contentions are that during the earlier stages of this narcosis vagal excitability is enhanced while the heart's spontaneous excitability is depressed; hence inhibitory action becomes intensified. Respiratory failure, he contends, is in the main the result of fall of the blood pressure. The paper is one of the highest importance and one of the ablest which has appeared. Although it is impossible to follow it in detail we cannot omit to mention an extremely interesting communication made by Dr. PAUL CAMPICHE in the *Revue Médicale de la Suisse Romande*, February, 1902. It deals with the question of ether narcosis and points out, as a result of the study of 745 cases of narcosis taken haphazard in hospital practice, that many, if not all, of the statements somewhat loosely made about the dangers and shortcomings of ether as an anæsthetic do not when examined in detail involve any strong indictment against the routine employment of this anæsthetic. In too many instances the presence of ether after-effects unsupported by evidence has been admitted, while the real factors at work have been ignored or not appreciated at their full value. Mr. E. M. CORNER and Mr. H. C. CROUCH, who in our columns have collected statistics of post-anæsthetic complications, are disposed to regard ether as the cause of lung troubles. It does not appear, however, how infection can be eliminated and it is at least noticeable that in France, where chloroform is extensively employed, lung complications are commonly associated with its use. HENLE[13] collected 1787 cases of laparotomies and found that the frequency of pneumonia was less when general, as opposed to local, anæsthesia was employed. It was greater in the older patients and was most common when circulatory disturbance existed or arterio-sclerosis and fever were present. COHN'S[14] case upon this point may be quoted. The patient died within five days of taking chloroform—from four to five ounces in one hour's operation. On the second day acute jaundice and renal symptoms appeared and at the necropsy fatty degeneration of the heart, liver, and kidneys was found. The patient was 21 years of age and the uterine appendages had been removed for disease. Whether the blood changes which follow inhaling anæsthetics can account for such degenerations there is not at present evidence to decide. The paper by DA COSTA and KALTEYER[15] reviews their clinical and experimental work upon the changes following ether inhalation which are found in the blood. They insist that the amount of the anæsthetic and the length of time during which the blood is exposed to it constitute important factors in bringing about the changes which they indicate. M. R. LOEWY and M. A.

[7] Archiv für Klinische Chirurgie, Band lxiv., Heft 1.
[8] Deutsche Zeitschrift für Chirurgie, October, 1902.
[9] Archiv für Klinische Chirurgie, Band lxiv., Heft 2.
[10] Revue de Chirurgie, No. 2, &c.
[11] Medical News, August.
[12] Journal des Praticiens, No. 15.
[13] Centralblatt für Chirurgie.
[14] Zeitschrift für Chirurgie, Band xvi.; Centralblatt für Chirurgie, October, 1902.
[15] Annals of Surgery, September, 1902.

PARIS[16] have conducted a similar research upon the results brought about in the blood by inhaling chloroform. These papers, which are too long to permit of detailed notice, are worthy of careful study. C. BLAULL[17] contributes a further research upon blood pressure under anæsthetics but as his results are similar to those generally accepted—namely, that a fall occurs under chloroform and most so in the case of children, while a rise is associated with ether inhalation—we need not discuss the matter here.

*Intradural Cocainisation by Injection.*

BIER, one of the warmest exponents of this, has, we gather, somewhat modified his views upon the subject. He cautions against an indiscriminate use of the method. He deals at length with the subject in a paper in the *Archiv für Klinische Chirurgie*, Band lxiv., Heft 1, giving his views on cocaine, eucaine, holocaine, and tropocaine. Dr. A. W. W. LEA[18] offers his experience of the lumbar puncture which he has used in a limited number of cases and gives a very fair statement of the arguments for and against recourse being had to this method. In a thoughtful leading article in the *Therapeutic Gazette* for January a *résumé* of the question appears. It is pointed out that as surgeons have acquired further experience during the last three years of spinal injection its dangers and limitations have been more recognised. Thus HAHN reports eight deaths in 1708 operations, and TUFFIER five in 252. MURPHY also has laid stress on the number of failures encountered due to various causes, some of which it is impossible to avoid. The alarming after-symptoms, parasthenia, distressing nausea, persistent vomiting, headache, delirium, and fever—are by some attributed to spinal meningitis, as their severity appears to coincide with the turbidity, itself due to the presence of lymph and cells of the fluid removed from the subdural space.

*Apparatus.*

Mr. VERNON HARCOURT of Oxford has shown before the Royal Society an apparatus for giving chloroform by definite percentage. The patient draws air over chloroform and by the intervention of an ingenious stopcock a 0·5 per cent., 1 per cent., 1·5 per cent., or 2 per cent. vapour is obtained. Whether further clinical use will prove as satisfactory as its theoretical value would indicate time alone can determine. In the *Boston Medical and Surgical Journal* of Jan. 23rd, 1902, Dr. H. P. MOSHER describes and figures an apparatus devised by Dr. FILLEBROWN and Dr. ROGERS which it is suggested permits of the employment of ether as a continuous anæsthetic in operations upon the upper air-passages and palate. If we admit that it is desirable to use ether in these cases this contrivance certainly enables it to be done.

## THE MIRROR OF HOSPITAL PRACTICE.

Many hospital cases of great interest have been published during the year in the "Mirror of Hospital Practice."

*Tetanus Antitoxin.*

Tetanus is a disease which is not very common in this country and yet it occurs sufficiently frequently to make its successful treatment a matter of much importance. At the present time the therapeutic point which needs determining most is the value of the antitoxin and the best method of administration. We have published two cases of the disease. One was under the care of Mr. F. J. WADHAM and arose as a consequence of a cut on a finger which was dressed with a cobweb. Trismus commenced 11 days later and was followed by general spasm and the patient was treated by the injection into the flank of tetanus antitoxin. Recovery ensued. In the other case the symptoms also first arose 11 days after an injury—a compound Colles's fracture. Two days later the spasms had so much increased that it was decided to employ the antitoxin and five cubic centimetres were injected into the right lateral ventricle of the brain through a trephine opening and at the same time 35 cubic centimetres were injected into the loins. Three days later improvement set in and the patient ultimately recovered. These cases are useful but we need many more before we can determine the true value of the tetanus antitoxin.

*Anti-streptococcic Serum.*

There is another antitoxin the value of which still remains to be determined and this is anti-streptococcic serum. We have reported two cases of its employment. In one case under the care of Dr. H. J. GODWIN puerperal fever developed after a full-term labour complicated by placenta prævia and hydramnios. 30 cubic centimetres were injected daily from the third day for six days and a smaller quantity for three days more. Improvement followed rapidly, though convalescence was retarded by an attack of malaria. The other case was under the care of Dr. P. N. GERRARD and was one of cellulitis of the face with suppuration and a very high temperature. Anti-streptococcic serum was injected and rapid recovery followed. The value of all such cases would be greatly enhanced if bacteriological examination of the blood were systematically made, for *in vitro* an anti-streptococcic serum prepared by the action of one kind of streptococcus will not counteract a different variety of streptococcus.

*Intestinal Obstruction.*

Dr. G. A. SUTHERLAND and Mr. W. WATSON CHEYNE have recorded a case of intestinal obstruction in a girl, aged three years, due to tuberculous peritonitis. The bowel was short-circuited and the patient recovered; her general health was greatly improved and within 18 months she passed successfully through attacks of pneumonia, measles, and diphtheria.

*Gastric and Duodenal Ulcers.*

We have published a large number of cases of perforated gastric ulcer and two cases under the care of Mr. R. H. LUCY and Mr. C. WHIPPLE are worthy of note, for they occurred in two sisters, the younger of whom was only 16 years of age; in both laparotomy was performed and they recovered. Staff-Surgeon E. R. D. FASKEN, R.N., has described a case in which an ulcer of the stomach perforated and then gave rise to multiple abscesses in the liver; but their dependence on ulceration of the stomach was not discovered till the post-mortem examination. Duodenal ulcer is less common than gastric ulcer and it is difficult to diagnose a perforated duodenal ulcer from a perforated gastric ulcer, but the same operation, an early laparotomy, is the only treatment for both conditions. Mr. ARTHUR CONNELL has published a case of this lesion. The patient was a man, aged 24 years, and the duodenal ulcer perforated. The abdomen was opened, the ulcer was closed by sutures, and recovery followed, but as the stomach was still much dilated a gastro-jejunostomy was successfully performed. The same surgeon operated on a man, aged 61 years, who for two or three years had suffered from pain after food. A sudden severe pain had appeared on exertion and when the abdomen had been incised a small perforation was found in the second part of the duodenum. This was closed with sutures and perfect recovery followed. Sir WILLIAM J. COLLINS has recorded a case in which after a successful laparotomy for a perforated gastric ulcer death ensued eight days later from hæmorrhage from a duodenal ulcer. Dr. CYRIL OGLE and Mr. A. MARMADUKE SHEILD have described a case of perforation of a duodenal ulcer in a man, 36 years of age. Laparotomy was performed, the perforation was closed and covered with an omental graft, and recovery was complete in three weeks.

*Intussusception.*

Irreducible intussusception is a very formidable condition

[16] Comptes Rendus Hebdomadaires de la Société de Biologie, No. 6.
[17] Beitrage zur Klinischen Chirurgie, Band xxx., Heft 2.
[18] Medical Chronicle, Manchester, December, 1901.

and Mr. W. H. BROWN's case of a successful excision of the irreducible portion of the invagination is noteworthy. The patient was four years of age.

Mr. J. RUTHERFORD MORISON has had two rare cases of intussusception. In one an inverted Meckel's diverticulum was the cause. The diverticulum was excised with success. In the other case, where the patient was a man aged 62 years, the presence of a polypus of the small intestine had given rise to the intussusception and a portion of the bowel containing the polypus was excised; the patient recovered and has remained well.

*Perforation of the Œsophagus.*

The œsophagus very rarely is perforated and a case under the care of Dr. NESTOR TIRARD is of special interest, as at the necropsy no obvious cause could be found for the perforation; it was situated at the level of the bifurcation of the trachea and led into a small abscess cavity.

*Resection of the Sternum.*

Dr. P. RHYS GRIFFITHS has published a case of resection of the sternum for a sarcoma. The patient, a man, 25 years of age, survived the operation four months, even though it was not found possible to remove the whole of the local disease. At the necropsy secondary growths in other parts of the body were found.

*Spinal Meningo-myelocele.*

A good example of the satisfactory results which may be obtained by excision in spinal meningo-myelocele occurred in the practice of Mr. R. ODELL. The child was only 13 days old and the cord was found to be adherent to the sac wall; it was carefully dissected off and the flaps of the membranes were brought together and sutured. The wound healed well and the child, except for some temporary collapse, which was treated by two saline injections into the flanks, recovered rapidly.

*Congestion of the Portal System.*

The attempt to treat congestion of the portal system by the establishment of a collateral circulation is reasonable and has proved successful in some cases. Dr. W. MURRELL records the case of a woman, aged 48 years, suffering from ascites due to hepatic cirrhosis. The suturing of the omentum to the abdominal wall was followed by great improvement for six months, when the patient died with signs of peritonitis. The method has a future before it in suitable cases.

*Acute Banti's Disease.*

Dr. MURRELL has also described a case of acute Banti's disease. The patient was a woman, aged 31 years, who had hæmatemesis. The red corpuscles were only 1,080,000 per cubic millimetre and the leucocytes 4375. She had a variable temperature and steadily grew worse in spite of treatment and died a fortnight after admission. No condition could be found in the stomach which would account for the hæmatemesis.

*Traumatic Dislocation of the Hip.*

Traumatic dislocations are extremely rare at the hip in childhood and therefore such a case occurring in a boy aged six years was remarkable. The patient was under the care of Dr. A. LLOYD OWEN and the injury was apparently due to a fall with both legs abducted. Reduction was easy. The lesion has been seen by ERICHSEN in a child only 18 months old.

## THE NAVAL AND MILITARY MEDICAL SERVICES.

Amongst the outstanding events of 1902 which go to make up the history of the British Empire the gladness with which the news was received in this country that the terms of peace, bringing the South African war to an end, had been signed at Pretoria is not likely to be forgotten. The year has likewise been a notable one for the changes and reorganisations which it has wrought in the medical services and for the appearance of new Royal Warrants and regulations in regard to them and the Army Nursing Service. These changes have been so numerous and some of them so important as to create an *embarras de choix* when the selection of the more salient of them for the purpose of being chronicled in our Annus Medicus has to be considered. Since the date of the Crimean war this country has been engaged in quite a number of expeditions and campaigns, no two of which were exactly similar or of the same dimensions, nor were any of them identical with those of other European nations; and the late war in South Africa was of an altogether exceptional character. But there are two things which may almost always be confidently predicted to occur. One is a state of more or less unpreparedness at the beginning when the war is undertaken and the other is a demand for reform and reorganisation at the end of it.

*A Survey of Progress made since the Crimean War.*

Taking a broad and general survey of our medical progress it may be safely said that whereas there is no finality about anything—and there still remains room for developing and improving our preventive measures and our methods of dealing with the sick and wounded in war—the progress that has taken place in these respects since the Crimean war has nevertheless been remarkable and the results will compare very favourably with those of other European Powers in similar circumstances. In proportion to the forethought and care which have been taken in preparing for war and in arranging matters of army hygiene and medical organisation has there been a progressively favourable advance. Our means and methods of transport in war have been multiplied and improved; battlefields are more rapidly stripped of their wounded who are now more systematically, safely, and comfortably transferred to hospitals and hospital ships than was formerly the case; the risks and evils of overcrowding have been lessened; infective wound diseases, the scourge of the war hospitals of the past, have, thanks to surgical cleanliness and the use of antiseptic methods, been well-nigh abolished altogether; and very beneficial changes have been gradually introduced into all relating to the accommodation, dieting, medical care and nursing, and general comfort of the sick and wounded soldier on field service. In one direction, unhappily, we cannot, any more than other nations, boast of having made much progress. We allude to the typhoid fever of armies.

*Typhoid Fever.*

It will be remembered that from a purely medical point of view all went fairly well with the army in South Africa until the occurrence of the deplorable epidemic outbreak of enteric fever at Bloemfontein. Our columns during the year 1902 have contained numerous articles regarding the prevalence of that disease in South Africa and as to the only too well known fact of the special liability of troops on field service to be attacked with this fever. It is an experience which is not confined to that campaign alone or to our army in particular, but is that of all armies, and the medical histories of modern war are largely made up of it, as a reference to the pages of THE LANCET during the year will make abundantly clear. Assuming the sole cause of this fever to be the bacillus of Eberth-Gaffky it follows that the complete life-history of that bacillus and the various ways by which it may gain an entrance into the human body have to be ascertained, together with the conditions which are favourable or the reverse to its growth and pathogenic activity when it gets there. The result of recent labours and investigations is to show that the inquiry is a complex and difficult one, that the avenues to infection, of which water is probably, however, the chief, are many, and that to devise methods applicable to conditions of field service by which these avenues may be practically safeguarded is a

far more difficult problem than is generally believed. We may here refer to the investigations of Major R. H. FIRTH, R.A.M.C., and Major W. H. HORROCKS, R.A.M.C., conducted at Netley, which form a valuable scientific contribution to both military and general hygiene; and the report of the Commission on the prevalence of typhoid fever in the United States Army may likewise be noted in connexion with this subject.

*Some Reflections on the late War.*

Before dismissing the subject of the late war and finally relegating it to things of the past we may perhaps usefully make a few remarks. It must be evident on a little reflection that in proportion to the extent of the area embracing military operations, to the wide dispersion of the enemy's forces and the unexpected and rapid marches and movements that have to be undertaken, the harder will be the task that falls on all the supply departments and hospital service of the army. But this seems to have been frequently altogether lost sight of during the late campaign in South Africa.

*Military and Civil Hospitals and the Medical Staff College.*

We sincerely sympathise, of course, with Mr. BRODRICK'S expressed desire to make the British medical service the best in the world. It is hopeless, however, to expect, as some people appear to do, that any Government can keep pace with the advances of a luxurious age or successfully compete with the national philanthropic efforts that are occasionally made in time of war; nor is it necessary. What is wanted is that our provisions for war and our war hospital service should be up to date and, in all that is essential, abreast of the sanitary and medical knowledge and requirements of the day. As time advances civil aid and institutions will probably have to be more and more subsidised and will be always forthcoming where the national interest is really concerned. And as regards the military service and hospitals, one of the best things about the newly established Medical Staff College and Advisory Board is that they will keep the military in touch with the civil medical element and the progress of science to the mutual advantage of both.

*The Report of Mr. Brodrick's Committee.*

It will be remembered that the publication of the report of Mr. BRODRICK'S War Office committee in 1901 led to that document being discussed from every point of view and subjected to severe and for the most part adverse criticism. We did not altogether concur in this, mainly because we regarded the strictures as premature and some of them as based on conjecture or insufficient information or possible misapprehension, and such subsequently turned out to be the case. Be all this as it may, we may refer to our leading article on the subject in THE LANCET of Jan. 4th, p. 40. While there were several defects and points in the report which might fairly be objected to, such as the proposed system of repeated examinations, to mention only one, we nevertheless thought that several facts seemed to have been altogether lost sight of; that it was, for instance, the report of a committee only and consequently a document of a purely temporary and advisory nature, and not of any permanent, official, or authoritative character. Moreover, the whole spirit and tone of the committee's report were indicative of an earnest desire, at any rate, to meet the views of the profession as represented by those eminent civil members of that committee who took part in its proceedings, and, despite all that could be said, the report admittedly contained many new and excellent recommendations, and was, as a whole, far in advance of anything that had gone before. We thought at the time, and we think still, that Mr. BRODRICK made one great mistake in not having put a medical officer of high rank and administrative experience upon the committee.

*The Issue of a Royal Warrant.*

In due time the Royal Warrant for the Army Medical Services made its appearance and was published in THE LANCET of March 29th (p. 912), and we may refer our readers to the leading articles in THE LANCET of that date (p. 902) and of April 5th (p. 977). We said at the time that, taken as a whole, we regarded the Warrant as a good one. We thought that the War Minister, the medical services, and the profession generally were to be congratulated upon its appearance. The correctness of our judgment has been ratified by the increased number of medical candidates who have been attracted to the service. It is very gratifying to us to notice that the Warrant is largely based on the principles, and includes a number of the points, which we have always regarded as important and for which we have consequently always contended. We are vain enough to think that if the framers of the Warrant and of the regulations subsequently issued had followed more closely on the lines of the comprehensive scheme set forth in the series of articles which we published in 1901 their labours would have been facilitated and some of their difficulties avoided. But in any case we see no reason for altering or modifying the good opinion which we have already expressed. The new regulations for admission to the Royal Army Medical Corps published in our issue of May 10th (p. 1339) are but supplementary and complementary of the Royal Warrant (*vide* Students' Number of THE LANCET).

One of the things still remaining for settlement is the pay and position of members of the Royal Army Medical Corps in India. From all we can learn the interchange of views between the home authorities and the Government of India has not hitherto much advanced matters, but Orders must be eventually issued on the subject.

*The Naval Medical Service.*

It followed as a matter of course, after what had been done for the Army Medical Service, that somewhat corresponding changes had to be introduced into the medical service of the navy and new regulations were accordingly issued for that service and formed the subject of a leading article in our journal of April 26th last and of some subsequent articles. There are so many differences between the two medical services that it would be impossible to apply the same measures to both. Speaking generally, however, the new regulations are regarded as satisfactory, but there are still some matters which might be altered with advantage to the service.

*The Indian Medical Service.*

The reports of the sanitary commissioner with the Government of India continue to be issued and to maintain a high standard of scientific and general interest (*vide* THE LANCET, May 24th (p. 1489) and June 14th (p. 1715), 1902. The Government of India deserves credit for its recent exhibition of zeal and energy in various directions of scientific inquiry and in the matter of public health. A good deal of interest and curiosity exists among members of the Indian Medical Service as to the anticipated changes in their service consequent on those which have been introduced in regard to the Royal Army Medical Corps.

*The Director-General of the Army Medical Service and the Advisory Board.*

The present Director-General was appointed in the autumn of 1901 and he was very properly made a K.C.B. in the autumn of the present year. We congratulate Sir WILLIAM TAYLOR and the service over which he presides on his succession to the office and his titular distinction and in regard to the official position which he holds in connexion with the Government, the War Office, and the military authorities. It is the first time that a Director-General has occupied so influential a position. Sir WILLIAM

TAYLOR will not only represent the views of himself and his department but, through the Advisory Board, those of the profession in general.

## CHEMISTRY.

### *Low Temperature Studies.*

There are no striking discoveries to record in chemical science this year, although it must be admitted that chemists have been engaged in two fields of research which are yielding results of the most remarkable kind. We have more than once had occasion to observe that all along the lines of scientific research there would appear to be clearly indicated a limitation of human attainment; man is able to discover and to discern after all only that which lies between narrow limits, all beyond being merely indications—shadows of a something which must be. To quote one example, Professor DEWAR has made an enormous number of experiments in the direction of obtaining excessively low temperatures, and in spite of the fact that by his experimental skill and patience he has succeeded in obtaining a temperature as low as 13 degrees absolute he has come to the conclusion that it is extremely improbable that the absolute zero will ever be reached by man. This is disappointing after so much labour has been expended, especially in view of the great interest which attaches to the question of what chemistry would be at zero. However, it would seem that we must be content with mere indications and must patiently await realisations. Professor DEWAR has shown how chemical affinity is modified by excessively low temperatures. Chemical action, in short, tends to cease and this fact is strange when we consider that the vitality of seeds is unaffected when they are exposed to a temperature not far off zero. The attainment of low temperatures has shown also that all known gaseous substances will assume the solid state if the degree of cold be intense enough.

### *Radio-activity.*

The field of research, however, which has proved to be most absorbing to chemists during the year has been the study of that comparatively newly discovered property of matter—radio-activity. According to some observers this phenomenon would appear to show that the atom itself is, so to speak, capable of dissection. It is assumed that radio-activity is a manifestation of sub-atomic chemical change. This change, though undeniably material and chemical in nature, is evidently of a different order of magnitude from any that have been dealt with in chemistry. Radio-activity is at once an atomic phenomenon and a chemical change in which a new state of matter is produced. It is probable that radio activity is not a specific property of certain so-called elements such as radium and polonium, for it has been shown that such familiar elements as bismuth and barium may be, so to speak, excited and then emit identical radiations. Moreover, radio-activity may be communicated from a radio-active substance to a non-radio-active substance. A property may thus be communicated and a question to be decided is whether this property is, after all, exceedingly attenuated matter. In connexion with this subject we may incidentally refer to the remarkable description which appeared in our Paris correspondence in THE LANCET of April 26th, 1902, p. 1216, of the photographs taken by M. VIGNON and exhibited by him of the winding-sheet preserved at Turin and traditionally said to be that of CHRIST. The phenomenon described would appear to justify the belief that the human body is either radio-active or gives off "vapours" which exhibit a similar action to light upon sensitive surfaces. It would appear, at any rate, that "we are face to face," as we wrote at the time, "with a new set of phenomena giving distinct indications of the existence of emanations hitherto not recognised from both animate and inanimate bodies." Years ago Sir WILLIAM CROOKES assumed the existence of matter in an ultra-gaseous state. He subsequently employed the well-known expression "radiant matter" to explain the novel phenomenon of, amongst other things, phosphorescence. He showed that, according to some of its properties, radiant matter would appear to be as material as a block of wood, whilst in other properties it almost assumes the character of radiant heat. Thus, he said, "we have actually touched the borderland where matter and force seem to merge in one another." What Sir WILLIAM CROOKES called radiant matter is now recognised as "electrons," and a chemical "ion" consists of a material nucleus or atom of matter constituting by far the larger portion of the mass and a few electrons or atoms of electricity. According to Professor J. J. THOMSON the mass of an electron is about the one seven-hundredth part of the hydrogen atom, and as these masses start from the negative pole in a vacuum tube with a velocity of the order of half that of light it is easy to see that their heating, phosphorescent, and mechanical power must be stupendous. Electrons emanating from radio-active bodies behave like material particles, partaking of the properties of a fog or mist, and are capable of being diffused away in the free air like odoriferous particles. We seem to be here in the presence of a fourth condition of matter and the pursuit after Sir WILLIAM CROOKES'S "protyle" promises to result in its capture—an achievement which would be of the most important kind in connexion with our views on the constitution of matter. It would seem but a step to determine whether the elements have been formed from "protyle" (of which it is assumed that all matter is composed) by a successive series of condensations.

### *Industrial Synthetic Processes.*

In regard to the studies directed to the production of compounds by synthetic processes no new striking triumphs have been announced, but considerable attention has been turned to the influence which artificial methods, as they are elaborated, are likely to have upon those industries depending upon the supply of natural products. As a case in point may be mentioned the fact that synthetic indigo is rapidly threatening to reduce the cultivation of the indigo plant to a dead calling. This singular menace to the prosperity of industries based upon the cultivation of natural products has received the serious attention of economists and others and feelings of alarm have not unreasonably been engendered. It may well be asked where is synthesis or the artificial production of common substances going to end? Already it is not difficult to give a list of articles in daily use, including foods, which have been successfully synthesised. The fact that such a result has been obtained on an experimental scale only does not justify the conclusion that the large scale will never be reached. We described in our columns recently how nitrate had been successfully synthesised by operating upon the nitrogen and oxygen of the air under the influence of an intense electric current generated by the enormous force of the Niagara Falls. Could the temperature of the atmosphere be raised sufficiently high its nitrogen would burn and the world would be deluged in nitric acid.

Summing up, it may be said that during the year the major problems of chemical science have been of greater interest than the minor problems, though amongst the latter some important results, adding considerably to the common stock of knowledge, have been brought to light.

## PUBLIC HEALTH.

### *The Influence of War upon the Public Health.*

When we look back over the past there are certain years which stand out as associated with some great discovery in connexion with preventive medicine, and there are others which are remembered as the years in which some important administrative measure was placed upon the statute book. It cannot be said that the year 1902 will be remarkable in either of these senses, although some important advances

in the science of epidemiology and in the progress of sanitation have been made. From every standpoint the most memorable event of the year has been the cessation of the strife in South Africa. Speaking generally, war is antagonistic to public health both in its immediate and remote effects. In the first place, it takes from the country the physically, and in a certain sense the morally, fit and leaves the relatively unfit at home to propagate their species, and in the second place it gives rise for the time to a diminished importance being attached to human life and, inferentially, to human health. Moreover, the enormous expenditure involved delays the carrying out of sanitary improvements. But notwithstanding this, there are few wars—and the last has been no exception—which have not taught us something with regard to the prevention of disease which has been turned to good account in subsequent campaigns. Unfortunately, the preventive idea was not adequately developed at the beginning of the South African war and it is difficult to believe that had a body of thoroughly trained and independent epidemiologists been sent out in the first instance to observe the behaviour of enteric fever, knowledge would not have been acquired which might have been profitably applied to the later stages of the campaign.

*Tuberculosis.*

In our Annus Medicus for 1901 we predicted that the year 1902 would see a very material advance in the provision of sanatoriums for patients suffering from pulmonary tuberculosis and that the subject of the control of this disease would occupy the attention of a large number of our county and district councils as well as of the guardians of the poor. Such has undoubtedly been the case, thanks in no small degree to the admirable lead of His Majesty the KING, and although but few of our counties are as yet in the actual possession of sanatoriums the present state of affairs is such that there is a good prospect that within the next few years every county in England and Wales will possess, or have access to, a public sanatorium. Moreover, the subject of the control of phthisis has advanced enormously in other directions during 1902 and almost every annual report of medical officers of health has devoted a considerable amount of space to a consideration of this subject. Provision has been made in numerous districts for voluntary notification, for the bacteriological examination of suspected sputum, for the disinfection of infected dwellings and things, and for the distribution of handbills and placards.

With regard to the much debated problem of the transmissibility of bovine tuberculosis to man the year 1902 has afforded experimental data which are not altogether in keeping with Professor KOCH'S statement at the recent London Congress. A well-constituted Royal Commission is at work in this country upon this subject and in the meantime Professor KOCH has taken advantage of the opportunity afforded him by the recent Berlin Congress to re-affirm his position. At this Congress some instructive papers were read and an International Committee which should do some useful work was formed.

*Tuberculosis in Asylums for the Insane.*

The fact that the inmates of asylums for the insane contribute an altogether undue share of the mortality returns of tuberculosis has long been recognised, but we were hardly prepared for the revelation contained in the report of the committee appointed by the Medico-Psychological Association to the effect that the death-rate from pulmonary tuberculosis in these institutions is something like 15 per 1000, as compared with a death-rate among the outside population of about 2 per 1000. It seems, too, that even this high rate inside the asylums is likely to be materially under the mark, and, moreover, that a large number of the patients contract the disease after entering the institutions in question. The whole subject has clearly been much neglected in the past and not all that was practicable appears to have been done even in the very essential particular of diagnosis. The excessive mortality from phthisis is attributed by the committee to overcrowding, uncleanly habits, too short a time in the open air, defective ventilation, and want of variety in diet. The remedies are obvious and they consist mainly in the abatement of overcrowding, early diagnosis of the disease either by physical examination or the employment of tuberculin, and the isolation of tuberculous subjects. The case seems somewhat on a par with that of asylum dysentery and it is to be hoped that in both these particulars the Commissioners in Lunacy will see their way, not only to enunciate a vigorous policy, but also to see that the necessary preventive measures are properly carried out.

*Small-pox.*

The recent prevalence of small-pox, into the details of which it is now unnecessary to enter, has taught us certain lessons, of some of which, it is to be hoped, the Government will be strongly urged to take advantage. In the first place, we have seen, contrary to the teachings of the anti-vaccinationist, that small-pox is in no sense dead—that it has not disappeared from our midst in the same way that leprosy has. It is true that in the recent outbreak we have not seen any serious approach to a malignant type of the disease, but we have experienced enough to show us that small-pox is still at our gates and that if we wish to keep it at bay we must not relax our preventive measures. As regards vaccination, the lessons of the outbreak are those with which we were already familiar—i.e., that efficient vaccination in infancy is a protective against small-pox for the early years of life, that such protection tends rapidly to fade at or about the time of puberty, and that if we wish to render our population practically immune to the disease we must follow the example set by Germany and inaugurate a thorough system of efficient revaccination. In connexion with the subject of revaccination the fact has been inconveniently brought home to us that if the majority of individuals postpone the operation until small-pox is actually in our midst an almost breaking strain is put upon our administrative machinery both in respect of the preparation of a sufficiently potent lymph and in the actual performance of revaccination. Panic vaccination is unsafe for the individual and unfortunate for the cause of vaccination. With respect to other preventive measures, the enormous importance as regards limitation of the spread of the disease by its early recognition has been again accentuated. Inasmuch as in the absence of small-pox few medical men can become thoroughly familiar with its manifestations, there is the more need that there shall be a systematic arrangement by means of which those who have had actual experience of small-pox shall be available for the assistance of those less experienced, and such a provision should be always in readiness. The experience of the last year has taught us also that with a well-ordered system of isolation and revaccination it is not necessary as a matter of routine to place those who have been exposed to infection into what is erroneously termed "quarantine," but that it is sufficient, generally speaking, if, adequate disinfection of the premises and infected articles having been carried out, the "contacts" are kept under observation, particularly as the time approaches at which they may be expected to develop the disease. In certain instances where the persons exposed to infection are of the nomadic type it is obviously of advantage if they can be detained and it would be well if district councils were furnished with discretionary powers in this direction. In the matter of isolation accommodation many of our county councils are doing excellent work in dividing the sanitary areas in their counties into groups for small-pox hospital purposes.

*Cancer Research.*

Up to the present time cancer is one of those numerous diseases, one of those veritable scourges of the human species, of which preventive medicine has taken but little notice. Until recently it was practically the same with tuberculosis. But there are indications—we dealt with some of them in a leading article in our columns on Dec. 6th—tending towards the conclusion that cancer may possibly be a communicable disease, not in the same degree as small-pox or even tuberculosis, but that in rare instances the disease may be conveyed from the sick to the healthy and that there are conditions, at present undetermined, associated with places and areas which conduce to cancer and which may be capable of detection and removal. In a word, the suspicion may possibly be considered sufficiently well-founded to justify caution in the intimate association of cancerous with healthy subjects and in dealing with discharges from cancerous growths. Be this as it may, the year 1902 will probably be remembered as that in which the foundation-stone of systematic cancer research was laid in this country.

*The Purification of Sewage.*

The Royal Commission which was appointed in 1898 to investigate this subject has continued its researches and has taken further evidence during the past year. The publication of its final report, however, still seems a somewhat far-off event. But those who are familiar with the methods adopted by the Commission must be satisfied that most valuable work is being carried on and that whether or not in their final report the Commissioners are able to tell us how to produce an effluent free from pathogenic organisms a very material advance in the matter of sewage treatment will be recorded. Fortunately, during 1902 the Commissioners have seen their way to issue another, the second, interim report. Although this report contains no generalisations which are of practical value, the contributions embodied in the volume are of high scientific importance and interest. Apparently there may not be much difficulty in the future in devising methods which will yield effluents of high purity chemically speaking, but the outlook *quâ* bacterial purity is not so promising. One of the most instructive papers in the second report of the Commission is that which relates to the behaviour of the pollution in the river Severn. We find here an excellent example of the parts played respectively by dilution and sedimentation in bringing about the self-purification of rivers. We are glad to hear that the Commission is now turning its attention to the important subject of the pollution of shell-fish by sewage, and the recent explosion of enteric fever which followed the mayors' banquets at Winchester and Southampton should do much to stimulate public opinion and thus assist in bringing about reform. The whole question, as our knowledge extends, is assuming large proportions and we trust that the Commissioners will take a comprehensive and statesmanlike view of the situation. If they adopt an exclusively bacteriological view of the case they may find themselves somewhat on the horns of a dilemma.

*The Control of our Water-supplies.*

The deputation which waited recently upon the President of the Local Government Board in the House of Commons gave expression to the somewhat urgent necessity which exists for a better control of our national water-supply. The amount of water in any one catchment area is obviously limited, and it is a matter of the greatest importance that the country as a whole shall be mapped out and controlled in what may be termed a hydrographical sense. Not only must we know as accurately as may be the distribution of our surface water, but a general effort must be made to learn more as to the behaviour of our underground sources of supply. The matter of water-supply in some parts of England and Wales is fast approaching a condition of urgency, and unless the present practice of more or less indiscriminate appropriation is stopped large aggregations of populations will wake up to find their water-supplies materially curtailed. Mr. LONG has evidently been well advised as to the subject and it is likely that a special Royal Commission will be appointed *ad hoc* or that the consideration of the matter in the first instance will be referred to the Royal Commission on Sewage Disposal, the members of which are already impressed with the necessity of mapping out the country into what may be called sewage catchment areas. Indeed, they have already gone so far as to say that the general protection of our rivers is a matter of such grave concern as to demand the creation of a separate Commission or a new department of the Local Government Board, which shall be a supreme authority dealing with matters relating to rivers and their purification, and which, when appeal is made to it, shall have power to take action in cases where local authorities have failed to do so. It seems to us that a department such as this might very well also have concern with our water, seeing that it should be the duty of such authority to make itself familiar with all water problems within the several catchment areas of the country.

*The London Water Act.*

We have discussed this matter from time to time in our columns during the past year and we do not propose to say more now than that we are gratified—very moderately gratified—at the time of writing to find that the position we have taken up has had some effect in modifying the Bill in the directions which we have indicated.

*Cremation.*

With the continued growth of our large towns and the consequent aggregation of population the difficulties of disposing conveniently of the dead must obviously increase. Although the matter can hardly as yet be regarded as one of urgency it seems clear that within measurable distance of time authorities will no longer be able to accord the freehold of a grave, that a short leasehold sufficient for a wholesome disintegration can alone be granted. In these circumstances the Cremation Act, 1902, which is an Act to legalise the burning of human remains, must be regarded as a statute of some public health importance, although the practice of cremation has, even in the absence of the Act, made considerable progress within the year that is past. It is, however, satisfactory to know that on and after April 1st, 1903, the several crematoriums in the country will be under the control of the Home Office and the Local Government Board, and we believe that a departmental committee is at the present time engaged in drawing up the regulations provided for by the Act of 1902. The more we learn with regard to the way in which specific infection may be carried by water in districts composed of rocks, such as the carboniferous limestone which is highly fissured, the more important is it that sources of possible pollution, such as may be afforded by the burial of bodies dead from certain infectious diseases, should be reduced in number, although bacteriological research has gone far to show that the bacteria of water-borne diseases are soon destroyed by putrefactive organisms.

*The Registration of Midwives.*

The passage through Parliament of the Midwives Bill should, from the point of view of preventive medicine used in the terms of its wider sense, be regarded as an important event, and although the Act does not come into operation until after April 1st, 1903, the Midwives Board provided for by that Act has already been formed. Whether in actual application the Act will prove beneficial or the reverse in the prevention of septic complications is a question which we must leave unanswered. For good or for evil the measure has reached the statute-book and it devolves upon the

Midwives Board to do its best towards the successful application of the provisions of the Act.

*The Regulation of Ice-creams.*

The better regulation and control of our food-supplies is a matter which has for many years been an urgent one, and although no comprehensive measure has been framed or passed during 1902 and the report of the Food Preservatives Committee is still unacted upon, we must in the present state of public business be thankful for even small contributions. The London County Council (General Powers) Act, 1902, contains clauses providing for the registration of ice cream vendors and for the preparation and storage of their wares, and we welcome this measure because it is one which we have for the last 20 years endeavoured to bring about. But we have been reminded by the recent outbreak of food-poisoning at Derby that if we are to prevent catastrophes of this nature not only must we have further powers for the control of the finished product, but we must exercise a more detailed supervision over the methods of preparation and over the places where the same products are stored and manipulated.

*Enteric Fever and Diarrhœa.*

It is interesting to notice that there was a very considerable drop in the number of deaths registered during the third quarter of 1902 from "fever" and from diarrhœa as compared with the number registered in the corresponding quarter of 1901. Practically the full force of the mortality from fever and diarrhœa is felt during the third quarter of each year. In that period of 1901 23,524 deaths from diarrhœa were registered, while in 1902 the corresponding number was only 6602, and in regard to "fever" the death for the period in question in 1901 were 1540, while the number for 1902 was 1154. Whether this marked diminution was entirely due to seasonal differences or to other factors we cannot at present decide.

*The Discovery of the Human Trypanosoma.*

Whether or not the honour of this most interesting discovery should be associated in point of time with the year 1898, 1901, or 1902 seems somewhat doubtful, but this fact will not detract from the credit due to all those who have worked at the subject. Certainly our knowledge with regard to it has advanced materially during 1902, and it is to be hoped that future researches will not compel us to take any very serious view as regards the danger of the disease to this country. Trypanosomata are now associated with no less than four animal diseases—*surra* in India, *nagana* in Central Africa, *mal de Caderas* in Brazil, and *dourine* in Algeria.

*Ankylostomiasis in Cornwall.*

The outbreak of anæmia in the Dolcoath mine in Cornwall, which has recently been ascribed to ankylostoma duodenale, is an event of considerable interest to epidemiologists, as it helps to confirm the view, which is gaining strength daily, that the so-called tropical or climatic diseases are not all of them governed by climatic conditions. The disease spreads in the Cornish mine through the uncleanly habit of excrement disposal adopted, or rather allowed, therein. The miners carry ova-containing excreta from their boots to the ladders and thence to their hands and mouths. Many of these miners had worked in foreign mines and the ova of the ankylostomata were found in the fæces of men who were in apparent health. The prevention of the further spread of the disease should prove a simple matter if proper precautions are taken as regards the disposal of excrement. There are probably many persons who have forgotten the discovery of this same disease among the miners in the St. Gothard tunnel in 1880.

*The Behaviour of Plague, Cholera, and Yellow Fever.*

The first two of these diseases, and in a minor degree the third, are liable from time to time to reach our shores and it is therefore a matter of public health concern that their movements should be closely watched. The following is a brief summary of the behaviour of each of the diseases in question in 1902.

*Plague.*

Plague continues to persist in the four quarters of the globe and shows no signs of abatement at the present time. India is still sorely stricken by the disease, the year 1902 having shown no diminution in the epidemic prevalences previously reported. Preventive inoculation on a large scale is being tried in one province, the Punjab, but with what result remains to be seen. China has also suffered severely; Hong-Kong supplied its usual annual epidemic, some 555 deaths from plague being recorded during the year. No large incidence of plague was reported from Japan, although small groups kept cropping up, usually imported cases, at several of the ports; but Formosa again contributed a considerable number of deaths from plague. At Honolulu plague did not become epidemic, but deaths from the disease continued from time to time to be recorded, showing that the disease still smoulders on; nor did plague show the same activity in the Philippines as in the previous year, the cases noted being apparently only sporadic. Some cases were reported from Siam and Cochin China in April and from Malacca in May. In New South Wales, at Sydney, plague again gave rise to a limited epidemic which subsided in June. During May plague attacked some of the animals in the Sydney Zoological Gardens, causing fatal results in 21 animals and birds. From Sydney infection was carried to the town of Newcastle, but fortunately the malady did not spread beyond those first attacked. In Queensland, too, especially at Brisbane, plague continued to occur but not on any large scale. In Western Australia and in Victoria isolated cases were reported, as also in New Zealand. At San Francisco, notwithstanding official denials and concealment abetted by the Governor of the State of California, plague has been present for many months in that city and in 1902 began to show greater activity. The majority of the patients were Asiatics, but the existence of plague at San Francisco and its long attempted concealment are not without danger to North America. In South America plague has been appearing during 1902 in Brazil at Rio de Janeiro, Port Alegre, Paranagua, Pernambuco, Campos, and Victoria; in the Argentine at Buenos Ayres; and in Paraguay at Asunçion. There have been also rumours that plague had occurred at Montevideo in Uruguay, but these cases were not officially declared. On the continent of Africa plague has not made much progress. The epidemic of 1901 in Cape Colony extended into the early months of 1902. At Cape Town and in the Cape peninsula itself, as well as at Mossel Bay, there has been little plague, but scattered cases have been reported during the year from Port Elizabeth, and practically during the whole of the year the existence of plague infection in rats has continued to be recognised, but has given rise apparently to little extension of the disease in man. A few cases were again reported from Magude in Mozambique. An outbreak of plague occurred in March at Nairobi, 326 miles inland from Mombasa in the East African Protectorate. In Madagascar plague reappeared in May at Majunga and in July at Tamatave. Mauritius experienced a continuation of the 1901 outbreak up to March, 1902, and again in the autumn there was another recrudescence of the malady which continued up to the close of the year. Plague appeared once more in Arabia in 1902; some cases were reported from Hadramant in May, and in Assyr in the autumn there was the annual reappearance of the disease which is regarded as now being endemic in the locality. In Egypt plague occurred in a number of towns including Alexandria, Tantah, and Dechneh as well as a number of villages in various provinces in Upper and Lower Egypt. In Constantinople scattered cases of plague were reported, as also at Smyrna and Beirut. Early in the year a small

outbreak occurred at Bagdad. In January plague was reported in Russian Siberia in the province of Saratoff, also in Transcaucasia in the province of Kutais. Batoum also yielded some cases. In June the occurrence of plague in Astrachan was again reported among the Nomads of the Khirgese steppes. In June cases began to be reported from Odessa, and notwithstanding an active enforcement of preventive measures cases continued to appear up to November, some 50 cases coming under observation. In June two cases of plague were reported on board an English vessel at Dunkirk, but the French authorities expressed themselves unable to deal with the landing of the sick or the disinfection of the vessel unless it sailed some 600 miles to the lazarette of St. Nazaire. The steamer, after waiting a week at Dunkirk, during which time the two plague patients died, preferred to sail for the Thames and to be dealt with there. She landed a third plague patient at Denton where he died. The vessel was thoroughly disinfected and nothing further occurred. In England during 1902 no indigenous cases of plague have occurred, though, as just related, one ship-borne imported case was brought from Dunkirk to Denton. Several vessels arrived in English ports with a history of suspicious illness on the voyage, but in none was evidence found of actual infection on arrival except the case just mentioned above; in all the cases reported to the port authorities the usual precautions were taken. In one instance the rats on board a ship unloading in an English port were found to be infected by plague. No human cases had occurred on the vessel. The usual measures for destruction of rats and disinfection of the ship were carried out and no illness of a suspicious kind followed among the crew or among those who were engaged in unloading her. In some few cases the existence of dead rats on board ships in port was reported, but in none of these was it found that the rats had died from plague. Glasgow, which had yielded cases in 1900 and 1901, happily escaped any development of human plague during 1902. On the whole, the facts as to the disease during 1902 are reassuring as regards this country.

*Cholera.*

In 1902 the cholera cloud again appeared upon the European horizon. In March the unwelcome intelligence reached us from Arabia that cholera had attacked the pilgrims in the Hedjaz and that not only were the holy cities of Mecca and Medina invaded but also the ports of Jeddah and Yambo. Later, some cases occurred on board the ships conveying the returning pilgrims for Egypt, Syria, Turkey, and Russia, to El Tor, the quarantine station where they are kept under observation before they are permitted to continue their journey. By May 1st the whole of the pilgrims detained at El Tor had been certified to be free from infection and had been allowed to disperse to their homes. In July cholera burst out in epidemic form in Upper Egypt and gradually spread over the whole country, causing many thousands of deaths and extending to the large towns of Lower Egypt, including Cairo and Alexandria. The epidemic reached its height in the middle of September and after that it gradually subsided. It is generally believed that the infection of cholera was imported into Egypt from the Hedjaz by returning pilgrims. The chief places in the Dutch East Indies which suffered from the disease in 1902 were Batavia, Samarang, Pekalongan, Soerabaya, Passervean, and Probolingo. At Singapore and in Borneo cholera was prevalent during the summer. In our own Indian empire, where cholera is endemic, there were the usual manifestations of the disease. There was exceptional prevalence of fatal cholera in China, including Hong-Kong, Shanghai, Amoy, Tientsin, and Newchwang; also in Manchuria, Port Arthur, Vladivostock, and other districts in the Amur province of Asiatic Russia. Cholera was also epidemic in Corea and Japan, including the island of Formosa. The Philippine Islands suffered severely from cholera during the year. It has been estimated that upwards of 75,000 cases have occurred. Towards the end of 1902 several localities in the Italian province of Erythrea along the African coast of the Red Sea were invaded by cholera probably brought from the opposite shores of Arabia, where cholera still continued to show itself—as, for example, in the Ports of Hodeida, Loheya, and Confudah, as well as in the hinterland of Assyr and Yemen. In September cholera was declared to have appeared in Syria and it spread with some rapidity, the chief places to suffer being Jaffa, Gaza, Lydda, and Tiberias. Some cases also occurred in Jerusalem. It may be added that cholera was reported to have broken out in Persia in July and that an epidemic of the disease had occurred in Cochin China. It will be seen from the above short sketch of the diffusion of cholera in 1902 that many parts of the world are infected by the malady. During the coming year it is not improbable that Europe itself may suffer from an extension of the infection and it behoves our port and riparian sanitary authorities to see that their preparations are made so that they may not be caught unawares.

*Yellow Fever.*

As is well known to the readers of THE LANCET, the etiology of yellow fever has been revolutionised within the last two years or so, and consequently new preventive measures are now at work with the most gratifying results in Cuba, at one time the home of yellow fever. The destruction of the mosquito species associated with the propagation of yellow fever is still being carried out on a large scale in various localities previously infected with yellow fever. But still along and around the shores of the Mexican Gulf and Caribbean Sea there are many places where the disease is endemic, as well as in Brazil and elsewhere. During 1902 Rio de Janeiro suffered from an epidemic of yellow fever. Ecuador, Dutch Guiana, French Guiana, Colombia, Costa Rica, and Mexico all yielded outbreaks of varying dimensions. Sporadic cases, presumably imported, were reported in a number of places, including Port Royal (Jamaica), Curaçon (Dutch West Indies), Puerto Cabello (Venezuela), and Panama (Colombia). Occasional outbreaks of yellow fever occur on the west coast of Africa and during 1902 one such outbreak was reported from Grand Bassam, where previous epidemics of the disease have prevailed.

Some alarm was caused in Spain during 1902 by the occurrence of a number of cases of a communicable disease suspected to be yellow fever at Pazos Barben, in the province of Pontevedra. The reports are of a somewhat indefinite nature and it is not possible to judge whether the cases were or were not true yellow fever.

## THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

The seventy-fourth and seventy-fifth sessions of the General Medical Council, which were held during the year in May and November respectively, were devoid of sensational incident and good work was done at each meeting. The proceedings at the ordinary meetings were lightened by a special session held in February to consider the report of Dr. D. C MCVAIL'S committee appointed to inquire into the differences existing between certain licensing bodies and the Council regarding the medical curriculum and certain conditions of medical study. This special session was held on the eve of the second reading of the Midwives Bill in the House of Commons, and the Council, having considered this measure before proceeding to its special business, found that it was not in accordance with its previous resolutions passed in regard to the Midwives Registration Bill of 1900. Sir JOHN BATTY TUKE was therefore requested to

communicate the views of the Council to the Grand Committee on Law, but, as our readers know, the attitude of the Council produced no material alteration in legislation. Dr. MCVAIL then presented the report of his committee which showed widespread nonconformity among certain of the licensing bodies with the Council's requirements and in a powerful speech he moved the reference of certain of the questions at issue—viz., those dealing with the alleged insufficiency of the curriculum of the English Royal Colleges—to the Privy Council. It was, however, decided that before taking this extreme step the Colleges should be asked to furnish to the Council information regarding the course of study exacted by the Conjoint Board in chemistry, physics, and biology, and that the examination of the Board in these subjects should be reported upon by visitors appointed by the Council. The special session enormously relieved the later proceedings of the Council throughout the year, as the subject of the registration of midwives was disposed of, while the troublesome question concerning the educational curriculum of the Royal Colleges was temporarily shelved. At the May meeting of the Council it became clear that the Council intended to use to the full its powers to preserve a uniformly high standard of preliminary education, while the financial position came under serious consideration. In the previous June a Financial Relations Committee had been appointed and this body now reported a thoroughly unsatisfactory condition of things—an annual deficit of £1200 per annum and the bankruptcy of the Irish Branch. The debates of the Council showed approval of an increased registration fee, no great enthusiasm towards the waiving of fees, and an absolute objection to an annual tax upon medical men, and the Financial Relations Committee was reappointed to draft a Medical Acts Amendment Bill carrying out the principles of financial reform endorsed by the Council. The draft of this Bill was brought forward at the November meeting and will be found published in full in THE LANCET of Dec. 6th, p. 1591. The Bill proposed to meet the impending insolvency of the Council by increasing the registration fee, by instituting an optional Students Register, and by improved administration to be effected by making the General Medical Council as a whole responsible for its finance instead of leaving the finances of each division of the kingdom in the hands of the respective Branch Councils. The Bill was referred to the Financial Relations Committee for further consideration of economies in expenditure, suggestions for which were notably absent in the draft; it is to be hoped that when it is next brought before the Council it will have taken a shape in which it can be presented to the House of Commons with reasonable expectation of success. At the November meeting it was decided to make certain alterations in the process of registration designed to make personation more difficult, while an interesting debate was also held upon the position of the Royal Army Medical Corps in respect of diplomas in State medicine. The verdict of the medical profession upon the three meetings of the General Medical Council held this year will certainly be that the work has been good and well directed, while the President is to be congratulated upon the manner in which he has been able to keep the debaters to the point.

## BRITISH MEDICAL ASSOCIATION.

The seventieth annual meeting of the British Medical Association was held in Manchester, the meeting commencing on July 29th. This is the fourth time that the Association has met in Manchester and the President this year was Mr. WALTER WHITEHEAD, F.R.C.S. Edin., consulting surgeon to the Manchester Royal Infirmary. He took for the subject of his presidential address Manchester's Early Influence on the Advancement of Medicine and Medical Education. The address was a most interesting historical retrospect of the part played by Manchester in the science and art of medicine and surgery. The Address in Medicine was delivered by Sir THOMAS BARLOW, Bart., K.C.V.O., the subject being the Study of the Natural History of Disease the Basis of all Advance in its Treatment. The Address in Obstetrics was delivered by Professor JAPP SINCLAIR, who took for his subject Carcinoma in Women, chiefly in its Clinical Aspects. There was no address delivered in surgery. Owing to the changes in the constitution of the Association there was but one general meeting held. Perhaps the most important event of the meeting as regards the Association itself was the announcement of the resignation of Mr. FRANCIS FOWKE who had held the post of secretary of the Association for 31 years. He was unanimously elected an honorary member of the Association. The Association has lost a faithful and devoted servant who will, we hope, be spared for many years to look back upon his period of zealous labour with satisfaction. The sectional meetings were well attended and amongst the colonial delegates and foreign guests present were the Hon. W. G. ROCKWOOD of Ceylon, Professor BAGINSKY of Berlin, Dr. JULES COMBY of Paris, Dr. J. HYSLOP, D.S.O., of Pietermaritzburg, Mr. JAMES GRANT of Ottawa, and others. An interesting memorial of the Manchester meeting is a magnificently got up book, entitled "Some Apostles of Physiology," the joint production of Professor WILLIAM STIRLING and of Mr. WHITEHEAD, a review of which appeared in our columns on Sept. 27th, 1902 (p. 873).

## VARIOUS HOSPITAL FUNDS.

### *The Metropolitan Hospital Sunday Fund.*

The enthusiasm of its members year by year infuses new strength into the Metropolitan Hospital Sunday Fund and again we have to chronicle the result of a very successful appeal. Under the able presidency of the Right Hon. Sir JOSEPH C. DIMSDALE, P.C., M.P., K.C.V.O., the late Lord Mayor and *ex-officio* treasurer to the Fund, a total sum of £62,669 12*s.* 7*d.* was announced, the largest amount ever collected on Hospital Sunday since the inception of the Fund in 1872. The result of the offertories at the various places of worship within the metropolitan area was £46,331, an increase of £10,000 over the sum collected last year. It will be remembered that Mr. GEORGE HERRING added one-fourth to the amount collected in places of worship and this worked out at £11,575. This generous benefactor of the Fund had given £10,000 on three previous occasions—namely, in 1899, 1900, and 1901. In the list of churches which contributed to the fund the metropolitan Cathedral of St. Paul's heads the list with £2129; Christ Church, Lancaster Gate (Rev. Prebendary C. J. RIDGWAY), followed with £1628; St. Michael's, Chester-square (Rev. Canon FLEMING), with £1388; and St. Peter's, Eaton-square (Rev. Prebendary STORRS), with £996. An increase of 65 in the number of contributing congregations was recorded. Among the large individual contributors mention should be made of Mr. CHARLES MORISON who gave £1000; Sir SAVILE CROSSLEY, Bart., M.P., who gave his eleventh donation of £500; "Delta," who sent his twenty-fourth donation of £200; and A. G. P. who sent £200. During the year grants were made to 202 institutions.

In succession to Mr. H. N. CUSTANCE, the secretary of the Fund, Sir EDMUND HAY CURRIE was appointed to fill the office and an important change has been made in the laws of the constitution by which the money distributed to hospitals will be wholly awarded to the maintenance of the patients.

### *King Edward's Hospital Fund for London.*

The task which His Majesty set for himself in planning this Fund was that of freeing the hospitals from debt. This

noble object His Majesty has not as yet succeeded in accomplishing, but to use the words of his Royal Highness the PRINCE of WALES when presiding at the annual meeting of the Fund at York House at the end of November "we have arrived within measurable distance" of seeing the KING'S wishes fulfilled. Notwithstanding the exceptional nature of the demands upon public charity owing to the late war in South Africa the subscriptions to King EDWARD'S Hospital Fund for the year 1902 have been greatly in excess of those of previous years, the sum available for distribution this year being £100,000 or double the amount distributed last year. Of this sum £7450 have been given for the purpose of opening 112 closed beds, making a total of 443 beds opened and maintained by the Fund since its inception in 1897, and £29,250 have been given for the purpose of reducing the debts of hospitals. It is worthy of note that the report of the hospitals distribution committee of the Fund states that "they hope to be able to bring about the amalgamation of some small hospitals, and if this attempt should prove successful they would be prepared to recommend the appropriation of a considerable sum to this object which is important alike in the interests of the institutions concerned and in those of the sick poor." During the present year the efforts of the Coronation Gift Committee together with those of the League of Mercy have played no small part in enabling the committee to recommend the large sum of £100,000 for distribution, but if this sum is to be maintained at least another £1000 a year will be required. This, however, will not be sufficient to achieve the object for which the Fund was started, and we hope ere we have the pleasure of chronicling the success of the Fund for another year that not only will the ordinary subscriptions have increased but that men of wealth will have emulated the splendid munificence of past benefactors to the Fund.

*The Metropolitan Hospital Saturday Fund.*

The Metropolitan Hospital Saturday Fund has made steady progress during the year, the income to Dec. 13th being £16,412, as compared with £16,088 on the corresponding date of last year. It is interesting to note the progress that the Fund has made since the abolition of the street collection in 1897. In that year £20,138 were collected, including £3330 from street boxes. It will be seen that the Fund this year has more than recovered the loss incurred by the abolition of the street collection and has distinctly increased in public favour. The main income of the Fund is derived from the penny-a-week collections in the workshops and places of business in London. This is steadily maintained notwithstanding the many other claims which are made upon the small resources of the workers. A special department has been created for the supply of surgical instruments upon payment by the patients of over 50 per cent. of the estimated cost. More than 3000 instruments are annually provided by this department under the supervision of a special committee assisted by competent surgeons and fitters Towards the cost of these appliances the patients contribute over £1800. Special arrangements are also made for sending men, women, and children to convalescent homes when recommended for such benefit by a medical man. Some 1250 patients were so sent during 1902, many on the part-pay system, nearly £600 being paid by the patients or their friends towards the cost of their maintenance. Another special department of the Fund is the ambulance department, by means of which men and women are trained to render first aid in cases of accidents in the workshops or in the streets, mostly in the workshops; and in cases where the employés of the firm subscribe £5 per annum to the Fund and employ a man or woman holding a first aid certificate of the St. John Ambulance Association they are supplied on loan with completely fitted ambulance boxes. The awards for 1901 amounted to £19,244 as against £17,690 in 1900. The awards for 1902 will not be decided till Jan. 24th, 1903.

## SANITATION.

Early in the year our attention was called to the nuisance caused at Torquay by a destructor for household refuse. A considerable number of inhabitants signed a petition asking us to send a special commissioner to investigate the matter on the spot. On arriving at Torquay our special sanitary commissioner collected a large quantity of contradictory evidence, but nevertheless it seemed quite clear that a number of susceptible people had suffered considerable inconvenience from the fumes of the destructor. In some cases the inconvenience amounted to actual illness. It was, however, still more certain that the site selected for the destructor was well calculated to expose whatever defects the system possessed. Instead of being placed on elevated ground so that the chimney might be well above the houses, it is situated in a hollow surrounded by hills. On the northern side the hills and the trees on their summit are higher than the chimney and on the southern side there is an amphitheatre of hills covered with villas. The fumes can be blown in a level and straight line from the top of the chimney into the windows of the houses that are close at hand on the neighbouring heights. That the destructor itself did not work well seems indicated by the various experiments made to treat the products of combustion as they issued from the furnace. But it is doubtful whether any destructor can be made so perfect that there shall be no odour whatsoever or other inconvenience which, if not noticeable at a distance, would at least be apparent close to the mouth of the chimney. Indeed, if such inconveniences were not feared, why should lofty chimneys be built? This the authorities at Torquay failed to appreciate, for they neutralised the good which the chimney might have done in removing the fumes by placing it at the bottom of a hole, so that it pumped out the products of combustion just on the level of villa windows. It is not surprising that vigorous complaints were made.

*Maidstone after the Epidemic.*

When in 1897 Maidstone suffered from a terrible epidemic of typhoid fever we published a series of reports on the local conditions pointing out the defects in the drainage of the town, the unsatisfactory ventilation of the sewers, and the close connexion between these conditions and the districts of the town that suffered most from the epidemic. It was then, however, the fashion to hold up the water-supply as the sole cause of the evil. When the town had had time to recover itself we were anxious to ascertain how far the sanitary authorities had profited by the severe lesson which they had received. The result of our inquiry made this year has been to show that the advice which we gave has been appreciated and followed. The most notable effort made has been to improve the drainage of the town. Thus, taking the seven principal items of sanitary improvements in relation to drainage there were 2794 such improvements effected during the two years that preceded the epidemic and 7776 during the two years that followed the epidemic. Again, when dealing with the connexion of houses and sewers and the sewers themselves there were 9250 feet of new glazed pipes laid during the two years preceding the epidemic and 37,714 feet during the two years following the epidemic. At the time of the epidemic, as we pointed out when describing the local conditions, many closets had no flushing apparatus and the house drains often leaked or were not properly connected with the sewers. After the epidemic these matters were looked into more closely and hence the enormous increase in the annual number of improvements that have been effected—an increase that vindicates the appropriateness of

the criticisms which we published when the town was suffering so severely from typhoid fever.

*Small-pox and Sanitation on the Riviera.*

At the termination of the winter season we were able to publish some important articles concerning the prevalence of small-pox on the Riviera. The season was exceptionally bad, many hotels were but half full, and one of the reasons was the fear of small-pox. This fear was certainly exaggerated, but it is no exaggeration to say that the accommodation for fever patients is altogether inadequate. The common hospitals in several towns are such old and insanitary buildings that no visitor if struck down by an infectious fever would care to be taken to such places. On the other hand, it is often impossible or ruinous to remain in an hotel or private apartment. The English and American colonies have taken this matter in hand and at Cannes have built a private English hospital with an isolation pavilion for infectious cases. At Nice efforts are being made to follow this example. At Monaco Prince ALBERT I. has built a model hospital which is replete with every modern contrivance and which was inaugurated in April last in the presence of the members of the International Medical Press Conference, then sitting in the principality. But then Monaco has always taken the lead in all improvements that depend on the energy of the administration. Here the drainage is more perfect than elsewhere and the scavenging is conducted with minute care. The principal remaining defect is the insufficient ventilation of the sewers, but this is a fault which Monaco shares with most other places. Our criticisms were published at the beginning of the summer—that is, just at the moment when the visitors had left and the local authorities could best undertake works of sanitary engineering. At Nice this would, among other things, consist of removing the sewer outfall from the celebrated Promenade des Anglais to a considerable distance from the centre of the town and also of altering a number of defective street gullies. But at Cannes nothing has been done to improve the drainage of the town, which remains in a scandalously defective condition. At Hyères barracks are to be built and this will augment the resources of the town, thus providing financial means for sanitary improvements which are there also much needed.

*Plague Precautions at Marseilles.*

One of the most interesting contributions which we published from the South of France related to the plague precautions taken at Marseilles. Our special commissioner visited the quarantine and disinfecting station established at the island of Frioul. He was able to describe the admirable precautions taken to separate the infected from the non-infected side of this vast establishment, and how human beings as well as bedding and merchandise were disinfected. He visited the rows of cabins—the first where the passenger is stripped of all his clothing, the second where he is douched, and the third where his clothes are brought back to him after they have been disinfected. Then we published details and statistics concerning the war waged against the rats—how passengers were allowed to land, but the ship was placed in quarantine in regard to the rats on board. Then there arose the problem of destroying the rats without injuring the ship or its cargo, but these are questions that will only be solved in a thoroughly satisfactory manner when more practical experience has been accumulated. The importance of this matter is shown by the fact that of the rats caught, from January to March this year, on board 44 ships, those that came from seven of the ships were suffering from plague. Altogether the authorities of the port of Marseilles killed during the first three months of the year no less than 10,611 rats.

*The Ventilation of Sewers and Dwellings.*

In England one of the most promising events of the year in regard to sanitation has been the prospect held out of a final solution of the sewer ventilation problem. The only objection to Mr. ISAAC SHONE'S scheme is that it looks as if it were too good to be true. As a mining and hydraulic engineer Mr. SHONE ought to know what can be done, and as we had occasion to relate he claims that it is possible so to control sewers as to insure with mathematical precision the admission and extraction of exactly the required volume of air, and further that these air currents will be evenly distributed in every part of the system, commencing with each individual house-drain. We gave all the details explaining how this was to be done and were pleased to record subsequently that the system would have a practical trial at Leicester. As this is the great anti-vaccination town where the argument is urged that sanitation and not vaccination prevents small-pox, we made some investigations to see to what extent this doctrine had been carried out in practice. Here we found that more than usual care had been bestowed upon the question of sewer ventilation but that this was still very defective, especially in the wealthier and better quarters of the town, because the inhabitants objected to ventilating shafts being affixed to the walls of their houses. The immense difficulties that beset this question of ventilation, whether applied to sewers or dwellings, were further illustrated when we described another experiment which also claimed to have resulted in something approaching perfection. This was the ventilation of a private room, a dining-room, by a method which had been devised by Dr. THOMAS GLOVER LYON and Mr. JAMES CADETT. An electric engine working a revolving fan drew air over trays of oil, which extracted its particles of dirt, and propelled the washed, and if necessary warmed, air into the room. Here a great portion of the wall space had to be sacrificed for the purpose of storing and diffusing the air so that its admission should be so gradual, slow, and evenly distributed as to be imperceptible. Similarly elaborate mechanical means had to be employed for its extraction. It all worked admirably. No amount of tobacco smoke could taint the atmosphere; all went away as soon as it was produced. The ventilation seemed perfect, but then the installation for one single small room would cost about £150; so the problem remains unsolved except for the very rich.

*Pail-closets and Typhoid Fever at Nottingham.*

One thing the town of Leicester has done. It has, practically speaking, abolished the pail-closets and forced even the poorest of cottages to establish proper water-closets. Rather than allow this to be neglected or postponed the town has contributed largely to the cost, thus enabling poor householders to carry out the reform promptly. The same cannot be said of the neighbouring town of Nottingham. Here some 200,000 out of 239,000 inhabitants still use pail-closets, and the evil of this is rendered manifest by the fact that typhoid fever is endemic in the town, though the few houses that have water-closets are comparatively free from this disease. Taking the average for ten years there was annually one case of typhoid fever for every 120 houses with pail-closets and one case for every 558 houses with water-closets. When we add that the houses with water-closets are scattered in all parts of the town and that the inhabitants drink the same water and the same milk as are consumed by their neighbours who have pail-closets, it seems obvious that this latter contrivance does contribute to the prevalence of typhoid fever. In regard to this disease Nottingham ranks with Salford, West Ham, Sheffield, and Sunderland as highest on the list among the great towns. Indeed, last year no other town had so high a proportion of deaths from typhoid fever as Nottingham. Yet the grievance in regard to the pail-closets has been made known over and over again. Protest after protest has been published. Nevertheless,

no general scheme has been adopted to remove the pail-closets.

## THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

At the ordinary Comitia held on Jan. 30th the President (Sir WILLIAM SELBY CHURCH, Bart.) announced that His Majesty the KING had graciously consented to continue to be an Honorary Fellow of the College. An address of congratulation was presented by the College to His Majesty on his recovery from his illness. The KING was graciously pleased to accept the same.

Sir WILLIAM SELBY CHURCH was again elected President of the College by a practically unanimous vote of the Fellows. The President accepted the invitation of the President of the Egyptian Congress of Medicine to be held in December, 1902, to be an honorary president o the congress.

The difficulties which had arisen between the College and the General Medical Council demanded serious consideration. The main point at issue is that the General Medical Council claims a right to select the institutions in which the preliminary scientific studies of the medical students of the various curricula may be undertaken after the students have registered. The College afforded certain information at the request of the Council regarding the courses of study in the preliminary subjects which the Royal Colleges required and also regarding the steps which were taken to ascertain whether the various schools and colleges recognised by the Conjoint Board were worthy of that confidence. The position of the College was thus summed up in the conclusion of the report read before the College by Dr. NORMAN MOORE, the representative of the College on the General Medical Council: "Throughout the prolonged discussion at the Council on the regulations of our College as regards the first year of medical study, now I hope concluded, I have endeavoured to make clear to the Council that as the powers of the College as regards its own curriculum rest not only upon Acts of Parliament and charters, but also upon its obvious competence to deal with questions of medical education, it cannot permit any encroachment upon its sphere of responsibility, but that it will always in the future, as it has since the General Medical Council came into existence, do all in its power to aid the Council in the duties which the Medical Acts have prescribed for it."

In conjunction with the Council of the Royal College of Surgeons of England it was resolved to consider and to develop a scheme for investigation into the causes, prevention, and treatment of cancer, and that for this purpose delegates should be appointed by the two Colleges to draw up a detailed scheme. Delegates were accordingly appointed and in due time a detailed scheme was drawn u and submitted to, and approved by, the College.

A committee was appointed to confer with representatives of the Royal College of Surgeons of England as to whether any practical scheme of common examination can be arranged with the University of London for the degree of M.B. of the University and the diplomas of L.R.C.P. Lond. and M.R.C.S. Eng.

The Milroy lectures were delivered by Dr. W. H. CORFIELD on the Etiology of Typhoid Fever and its Prevention and the Lumleian lectures by Dr. F. T. ROBERTS on the Comprehensive Study of Thoracic Phthisis. The Croonian lectures we to have been delivered by the iate Dr. J. W. WASHBOURN, the subject being the Natural History and Pathology of Pneumonia. The task of revising and arranging these lectures was undertaken by Dr. J. W. H. EYRE and they were actually delivered by Dr. W. HALE WHITE. The Goulstonian lectures were delivered by Dr. G. F. STILL on Some Abnormal Psychical Conditions in Children. Dr. C. J. CULLINGWORTH was the Bradshaw lecturer, his subject being Intra-peritoneal Hæmorrhage Incident to Ectopic Gestation. The Harveian Orator for the year was Dr. DAVID FERRIER.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At the annual election of members of the Council there were eight candidates for the four vacancies and Mr. HOWARD MARSH was re-elected and Mr. J. H. MORGAN, Mr. H. H. CLUTTON, and Mr. C. W. MANSELL MOULLIN were elected. As Mr. MOULLIN received the fewest votes of those elected he became substitute member for the late Sir WILLIAM MACCORMAC. The unsuccessful candidates were: Mr. JORDAN LLOYD, Mr. J. BLAND-SUTTON, Sir WILLIAM H. BENNETT, K.C.V.O., and Mr. CLINTON T. DENT. 743 Fellows voted, 19 personally and 724 through the post.

Sir HENRY G. HOWSE was unanimously re-elected President and Mr. JOHN TWEEDY and Mr. A. W. MAYO ROBSON were appointed Vice-Presidents. The Hunterian professors appointed were: Mr. CHARLES STEWART, Mr. WILLIAM MCADAM ECCLES, and Mr. ARTHUR KEITH. Mr. JOHN HERBERT PARSONS was appointed Arris and Gale lecturer, and Dr. CHARLES BENT BALL, Hon. F.R.C.S. Eng., was appointed Erasmus Wilson lecturer.

The Council has considered the possibility of entering into some measure of combination with the University of London for examination purposes, and a committee was appointed to consider and to report, and to this committee also was referred a petition from the Association of Licentiates of the Royal College of Physicians of London and Members of the Royal College of Surgeons of England, asking for facilities for obtaining the title of "Dr." The committee recommended that the Royal College of Physicians should be asked to appoint a committee to act in conjunction with the committee of the College and the Council has acted on this recommendation. So at present the matter is undetermined.

At the annual meeting of Fellows and Members held on Nov. 20th only 50 Fellows and Members were present and seven members of the Council. Resolutions were carried by large majorities in favour of the extension of the franchise to the Members and in favour of the College entering into combination with the University of London in order to facilitate the acquisition by London students of the title of "Dr." A motion in favour of admitting strangers to the gallery during the annual meeting was lost by one vote.

No essay was received in competition for the Jacksonian prize, the subject being the Diagnosis and Treatment of Bullet Wounds of the Chest and Abdomen. The subject chosen for the Jacksonian prize in 1903 is the Various Forms of Conjunctivitis: their Pathology and Treatment.

The Bradshaw lecture was delivered by Mr. HOWARD MARSH, the subject being Infective Arthritis. The PRESIDENT will deliver the Hunterian Oration in 1903.

Two Members of 20 years' standing were elected Fellows; these were Mr. WILLIAM HENRY POWER, C.B., F.R.S., principal medical officer of the Local Government Board, and Dr. GEORGE BAGOT FERGUSON, late President of the British Medical Association.

The second volume of the catalogue of the Physiological Series of Comparative Anatomy has been sent to the press; it is to be sold at 12*s.* per copy.

One of the honorary Fellows of the College, Dr. FEDERICO RUBIO Y GALI of Madrid, has died.

Notice has been received that the College has a reversionary interest in three-fourths of the residuary estate of the late Mr. JAMES WILLIAM GROVES, formerly professor of botany at King's College. It is understood that the amount will be approximately £30,000.

The gross income of the College for the collegiate year was £26,954, being £850 more than in the previous year; the expenditure was £24,377.

The College has taken an important share in the inauguration of the Cancer Research Fund and the PRESIDENT, Mr. JOHN LANGTON, and Mr. HENRY MORRIS were appointed members of the Executive Committee of that Fund and Sir ALFRED COOPER was nominated as a trustee of the Fund to represent the College.

## THE BENEVOLENT AGENCIES OF THE PROFESSION.

### *The Royal Medical Benevolent College.*

This institution continues to carry on its useful work. From the funds of the charity a first-class education with clothing and maintenance is given to 50 foundation scholars, the orphans or necessitous sons of medical men, and pensions of £30 a year are given to 50 aged and distressed medical men or to the widows of those deceased. There are nine "Pugh" pensions of £30; three "Morgan" annuities of £20 for the aged daughters of medical men; three "Da Silva" pensions of £20 for aged pensioners (in addition to their ordinary pensions); and seven "France" pensions of £30. There are in connection with the institution 11 presentations to the schools of St. Anne's Society for the daughters of medical men. As may be understood, in the case of an institution dating back about 50 years numerous old friends are lost by death year after year, so that fresh supporters are urgently required in order to maintain the good work. Annual subscriptions of one guinea give voting power, but the council emphasises the fact that small subscriptions are welcome. We are constantly urging the claims of this institution upon our readers and may once more express the hope that those practitioners who do not now subscribe to the institution will become regular contributors, if only of 5*s.* a year. The secretary is Mr. J. B. LAMB, 37, Soho-square, W. As for the educational successes of the boys, during the past six years no fewer than 12 scholarships or exhibitions have been gained directly from the school at the Universities of Oxford and Cambridge, including one of £80 and two of £50 for mathematics, one of £60 for classics, and one of £50 for science.

### *The British Medical Benevolent Fund.*

28 applications came before this fund during the year, but as the sum available for distribution amounted to £100 15*s.* 9*d.*, 15 only of them could receive relief and that in sums much smaller than the need demanded. Many of the cases still standing over are of a very distressing character and money is urgently required to enable the fund to meet the demands made upon it. The committee appeals very earnestly for increased support and trusts that the claims of the fund will not be forgotten at this time of the year. Subscriptions and donations may be sent to the treasurer, Dr. SAMUEL WEST, 15, Wimpole-street, W., or to Mr. W. E. SARGANT, St. Bartholomew's Hospital, Smithfield, E.C. (hon. secretary for cases).

### *Society for the Relief of Widows and Orphans of Medical Men.*

During the year 54 widows and 15 orphans have been assisted by the above society and a sum of £3254 10*s.* 6*d.* was given to them. Four fresh applications were made by four widows and grants were made. 12 new members were elected and 299 members were on the books. The funded property is now £98,600. The death of Mr. JAMES THOMAS WARE, a vice-president and at one time acting treasurer, was reported, Mr. WARE's grandfather and father having both been presidents of the society.

### THE LANCET *Relief Fund.*

THE LANCET Relief Fund, which was established in 1889 by the proprietors of THE LANCET for the purpose of affording immediate pecuniary assistance to medical men or their widows and orphans in cases of distress and emergency, by grants of money on loan free of interest or by gifts, has assisted some 23 persons during the past year, involving an expenditure of £308. As the accounts are not made up till the end of the year there is a probability that these figures may fall short of the actual totals.

## CONTRIBUTIONS FROM THE LANCET LABORATORY.

In addition to the analytical reports which regularly appear in our columns the work of THE LANCET Laboratory during the year has been directed to two special inquiries and has further dealt with a number of minor questions of medical interest. The first special inquiry referred to was that relating to the iodo-bromo-saline waters of Salsomaggiore. The report appeared in THE LANCET of July 12th, 1902, and contained some interesting results of analysis. It was shown that the waters of Salsomaggiore are unique, not only in containing an unusual amount of the rarer salines such as the chlorides of lithium and strontium and the iodide and bromide of magnesium, but also gases and liquid hydrocarbons. It was also pointed out that in contact with air and light the water yielded some of its iodine in the free state, and again that part of the iodine so liberated eventually combined with the bituminous oils. We suggested that the successful administration of the water in the form of inhalation was probably due in some degree to the iodinated oil thus formed, aided by the rare salines. The wells at Salsomaggiore were inspected by our special commissioner who also directed his observations to the public health measures that had been taken at this health resort. He was able to state that excellent sanitary provisions had been made and hotel accommodation provided for the visitors. He also examined the sources of the water-supply, samples being taken and submitted to analysis, with the result that a striking purity of composition was presented. The treatment at Salsomaggiore included, as described, certain novel features in balneo-therapeutic practice.

The second special inquiry undertaken by THE LANCET Special Analytical Commission related to the production of brandy at Cognac, the present position of the industry in the Charentes, and the supply of genuine brandy to this country. The report appeared in THE LANCET of Nov. 29th in the form of a supplement of 16 pages with illustrations. The conclusions of the Commission were based upon a visit to the vineyards of the Charentes during the harvest of 1901 and upon the results of a number of analyses of vintage brandies taken from the stocks in Cognac by our Commissioner, from 1811 downwards, of present types of brandies in the market, restaurant brandy, public-house brandy, spurious brandy, and root and grain spirits. The analyses involved close upon 500 determinations and occupied the attention of the Laboratory staff during the greater part of the year. A history of the phylloxera period was given and the methods of the re-plantation of the vineyards were described at length. It was shown that the industry has once more approached a prosperous time, the harvest now yielded being abundant, while the brandy obtained promises to develop those special features characteristic of the produce of the Charente vineyards in pre-phylloxera times. The trade in spurious brandy was described and it was suggested that some more specific measures than are now taken might be adopted to insure the sale of genuine brandy and that chemical analysis should be directed to the question of discriminating between the genuine and the false, and not merely, as at present is the case, to the question of the alcoholic strength of spirits. That more strenuous control than has hitherto been adopted is desirable is evident from the fact that brandy is undoubtedly widely trusted for medicinal purposes. Grain or root spirits do not possess the same medicinal properties as a matured wine spirit and in this connexion genuine brandy may be regarded as a drug which should be supplied of a standard quality. As a matter of fact, the British Pharmacopœia defines it as "a spirituous liquid

distilled from wine and matured by age." It is well known that the price of genuine brandy considerably exceeds that of grain spirit and yet the substitutes so commonly offered in sixpennyworths or shillingworths consist almost entirely of grain or sugar spirit. In one case THE LANCET Commission found so-called brandy to be little better than a blend of grain or root spirit with rum. Brandy, however, sold in bottle, with the labels and capsules intact and the names of well-known Cognac firms printed upon them, was found to be genuine grape-derived spirit.

Early in the year we published a chemical account of the new postage-stamp. We could find no ground for objection either to the colouring or the adhesive materials used. In THE LANCET of Jan. 11th we discussed certain proposals to bring about the artificial maturation (!) of whisky. The idea was to eliminate the aldehydes, but, as we have shown, the specific characters of whisky, as, indeed, of brandy, depend upon the secondary products of fermentation, and the changes which age brings about are not due to the elimination of these bodies but to some subtle modification of them. Moreover, after the removal of aldehydes more would form as a result of the oxidation of alcohol. In THE LANCET of Feb. 22nd we called attention once again to the dangerously inflammable nature of celluloid. In spite of the striking and practical demonstrations which we have recorded in support of the dangerous possibilities of this nitro-compound when employed in articles of dress we still continue to hear of serious accidents. We suggested some years ago that the manufacturers of these dangerous articles should be compelled to stamp upon them the words, "Highly Inflammable." We had occasion to refer in THE LANCET of May 31st to the increasing practice of adding artificial colouring matter to milk, annatto being the dye commonly employed. We are at a complete loss to understand why the excellent recommendations of the Departmental Committee on Preservatives and Colouring Matters in Food, published over a year ago, have not yet been considered and embodied in the statutes. In THE LANCET of June 14th we referred to the existence of a disgusting practice in regard to the carriage of vegetables from market gardens to London. It is quite common knowledge that many, at any rate, of the market carts which bring vegetables to London do not leave the metropolis again empty, and very often the returning freight is dung, offal, and other filth, and yet no attempt is made to cleanse, not to say disinfect, the vehicle between the down and next up journey. We earnestly referred this matter to the attention of our sanitary authorities.

In THE LANCET of June 28th we pointed out the outrage which is committed by cement makers upon the air and scenery of some of the most picturesque parts of our country. Surely engineering is a sufficiently advanced science to deal with this terrible source of defilement. The fumes of cement works are not only an eyesore but a decided detriment to the well-being of plant life and to human life also. We raised the question in THE LANCET of Oct. 4th as to whether air containing traces of alcohol would be prejudicial to health, our attention having been drawn by a correspondent to one instance in which definite steps were taken to ascertain whether the air of an office in a wine and spirit warehouse contained alcohol vapour. Experiment established the presence of a notable amount of alcohol in the air and there can be little doubt that such air is likely to prove objectionable to health. In the same number of THE LANCET we remarked upon the desirability of instituting a system of supervision of the kitchens of hotels, restaurants, and other places. We believe that a system of control is being attempted in this direction and everyone will agree that this step is, in the interest of public health, a correct one. In THE LANCET of Oct. 11th we announced that at last the London County Council had obtained powers which enabled it on Nov. 1st to exercise control over the sale and manufacture of ice-cream. For over 20 years we have persistently advocated this reform, the position we took being based upon some remarkable revelations in regard to the horribly insanitary condition under which ice-creams were made in the Italian quarter at Hatton-garden, where cheap ices are largely prepared.

The number of specimens of food, drugs, and other articles examined in THE LANCET Laboratory and reported on in our analytical column during the year was 112 and the number of individual analytical determinations thereby involved was 466. In connexion with the work of special commissions some 470 analyses were made, bringing up the total to 936, an advance of 270 on last year's record.

## THE ORGANISATION OF THE PROFESSION.

THE successful struggle of the medical practitioners at Yarmouth against club practice and the support then given by the General Medical Council, which condemned the employment of agents and canvassing to secure patients, caused some lay newspapers to animadvert in regard to the position of the medical profession. In reply to these criticisms we opened the year with a recapitulation of the principal arguments and facts that had induced the general practitioners to form medical unions throughout the country and to seek by organised efforts to maintain the dignity and independence of the profession. Then from such generalisations we proceeded to describe other concrete cases—the grievances on the one hand and the efforts to deal with them on the other hand—commencing with the town of Birmingham. This is so vast and important a centre that it has been necessary to visit Birmingham on several previous occasions. The difference this year is, that while formerly our Commissioner could only describe the grievances that existed he was now able to pay tribute to the organisation which has recently been formed and numbers more than 200 members. The Birmingham and District Medical Practitioners' Union, we then pointed out, will have, among other crying grievances, to deal with the great amount of abuse that prevails at the Birmingham General Dispensary where, among the 40,000 or 50,000 patients treated per annum, there are many who could afford to pay the usual medical fees.

Having for several years thus given prominence to the ethical and economical questions that affect the medical profession we devoted special attention to the discussions of the ethical section at the annual meeting of the British Medical Association. The chief importance of these meetings now depends on the application and working of the new constitution. If this reform is realised then the British Medical Association will become a militant organisation like the various unions and will fight out their numerous grievances. In the meanwhile these unions have wisely preserved their organisations intact and have not surrendered their autonomy in exchange for what is as yet but a paper scheme. Naturally it is preferable that all organised effort should be centralised in one single association, but in practice such unity is not easily brought about. The difficulty is that some sections of the medical profession feel very keenly the necessity of action in regard to economic matters, while other sections ignore the existence of such questions, and yet it is proposed that all should take equal part in the work that has to be done.

The next question dealt with was the effort of the organised medical practitioners at Leigh in Lancashire to prevent the creation of an out-patients' ward in the hospital about to be built for this new centre of industrial population. The local practitioners are so convinced that an out-patients' ward would lead to extensive abuse that they have offered to treat gratuitously at their own private surgeries those persons who might be considered to have a legitimate right

to apply at a hospital out-patients' ward. The workmen, on the other side, who propose to subscribe pennies weekly, look to such an out-patients' ward as a place where they will receive, not charitable aid, but medical attendance at a cheaper rate. Indeed, this interference with the management of hospitals by the very class who resort to hospitals as patients is becoming more and more general and, as we have had occasion to point out, threatens the very existence, as at present constituted, of hospitals supported by voluntary contributions. In some towns a quarter or even a third of the income on which the hospitals depend is collected in pennies from working men, and in exchange they insist on having a voice in the management. As a result the charitable character of the hospitals is likely to be more and more obliterated. The subscriptions from the middle and upper classes are decreasing as those from the working class increase, and the influence of the latter will tend to convert hospitals into provident institutions managed by committees in which the workmen's votes will predominate. The State or the municipalities may then be compelled to interfere so as to preserve clinical schools for the purposes of medical education.

The battle of the clubs has continued during the year, though not with so much bitterness as on past occasions. In many districts it consists of attempts to imitate what has been successfully combated and checked at Yarmouth. This we showed is particularly the case at Chesterfield. Here the various friendly societies and medical aid clubs are seeking to unite. They propose then to take a house and to locate therein some unfortunate medical practitioner who shall be at their beck and call, their servant in every respect, and who shall be forbidden to have any private practice lest he should find the means of escaping from his thraldom. Against this the Midland Medical Union is struggling to its uttermost. This is a new organisation uniting the medical practitioners of the counties of Derby and Nottingham. But it has met with serious opposition from an unexpected quarter. We are informed by colliery surgeons that managers and proprietors of coal mines have gone so far as to issue circulars against the medical union, denouncing medical men as if they were turbulent individuals who gave a lot of trouble and even threatened to increase the price of coal. Because colliery surgeons have declared that they would no longer attend cases of midwifery for 10*s.* 6*d.*, but should be paid £1 1*s.*, therefore the prosperity of the British empire will be imperilled. Presumably the argument is that the miners will want higher wages so as to pay their medical man's bill; that therefore the price of coal must be raised; and that this by crippling the industry of the country will insure the triumph of foreign competition and the downfall of the empire. The medical practitioner who very truthfully protested that he really could not pay his way if he only received 10*s.* 6*d.* for accouchements little thought that his demand for a guinea would entail such far-reaching and ruinous consequences. No such ridiculous pretences have been brought forward in the coalfields of Northumberland. Here, on the contrary, the coal owners have observed an attitude of sympathetic neutrality towards the medical profession. It has never occurred to them to interfere against the colliery surgeons. Indeed, the better the medical attendance on the miners, the better the care taken of their health, the greater will be the prosperity of the mining enterprise. But these ends cannot be secured if the colliery surgeons are underpaid and overworked. Throughout Northumberland the colliery surgeons have demanded an increase of from 6*d.* to 9*d.* per fortnight for medical attendance on the families of colliers and in most cases this has been granted. We have described some places where a struggle is still pending. But the Northumberland and Newcastle Medical Union is a well-organised and active body and it is likely to render still greater service now that in conjunction with the County of Durham Medical Union it has come to an agreement with the consultants of the two counties. A judicial committee has been formed consisting of two representatives from each of the two unions, their presidents, and two elected representatives of the consultants. No medical practitioner will be condemned as acting unworthily and be ostracised till his case has been considered by this committee. On the other hand, the consultants having had a voice in deciding on the verdict will now be bound to perform their share in carrying out the sentence. It is, unfortunately, almost impossible to enforce strict discipline without some punitive powers and these have now been better secured in the counties of Northumberland and Durham.

## HONOURS TO MEDICAL MEN.

For the most part the honours which our gracious Sovereign is pleased to confer upon medical men are rewards for professional merit, and professional merit in this case almost invariably means work done in the cause of suffering humanity. In saying this we do not forget that in the naval and military branches of our profession rewards are frequently given for valour and for conspicuous devotion to duty, for we hold that professional merit covers all these virtues. It is therefore with pardonable pride that at the end of each year we gather together in one roll the names of those who have been specially chosen for honours and we extend to them in the name of all practitioners of the healing art our cordial congratulations.

### *The Coronation Honours.*

In this the Coronation year of KING EDWARD VII. it is fitting that we should begin our list of distinguished medical names with an enumeration of those who were included in the list of honours which was made public a week after the date originally fixed for the Coronation of the King. On this occasion His Majesty instituted the new Order of Merit and the name of the Right Hon. Lord LISTER was included among the 12 eminent men who were selected to be members of this Order. Lord LISTER was at the same time made a member of the Privy Council. Baronetcies were conferred upon Sir FRANCIS LAKING, K.C.V.O., physician-in-ordinary to His Majesty, and Sir FREDERICK TREVES, K.C.V.O., C.B., honorary serjeant-surgeon to His Majesty, and the following gentlemen were made Knights: Dr. W. J. COLLINS, Mr. ALFRED COOPER, Dr. J. HALLIDAY CROOM, President of the Royal College of Surgeons of Edinburgh; Dr. THOMAS R. FRASER, F.R.S., President of the Royal College of Physicians of Edinburgh; Mr. VICTOR HORSLEY, F.R.S.; Mr. H. G. HOWSE, President of the Royal College of Surgeons of England; Mr. HENRY BELL LONGHURST, honorary surgeon-dentist to His Majesty; Professor WILLIAM MACEWEN, F.R.S.; Dr. THOMAS MYLES, the President of the Royal College of Surgeons in Ireland; Dr. ISAMBARD OWEN, Senior Deputy Chancellor of the University of Wales; Professor WILLIAM WHITLA; Dr. A. CONAN DOYLE; and Mr. CHARLES WYNDHAM, who, though now a popular actor, some 30 years ago, before adopting his present calling, was a member of our profession, obtaining a medical degree and serving in a medical capacity in the American civil war. Sir WILLIAM CHURCH, Bart., President of the Royal College of Physicians of London, was appointed a Knight Commander of the Bath (Civil Division). Included among the Companions of the Bath (Civil Division) were the names of Major RONALD ROSS, F.R.S., I.M.S. (retired), and Dr. B. ARTHUR WHITELEGGE, His Majesty's Chief Inspector of Factories. Two medical men were appointed Knights Commanders of the Order of St. Michael and St. George—viz., the Hon. Dr. FREDERICK W. BORDEN, Minister of

Militia and Defence of the Dominion of Canada, and Surgeon-General H. H. PINCHING, head of the Sanitary Department at Cairo. Dr. HO KAI was appointed a Companion of this Order. The Kaisar-I-Hind medal for public service in India was granted to Mr. EDGAR THURSTON, superintendent of the Government Central Museum, Madras. The following list of naval and military honours was also announced: Inspector-General of Hospitals and Fleets JOHN DENIS MACDONALD, R.N. (retired), Surgeon-General JOHN ANDREW WOOLFRYES, C.B., C.M.G., honorary physician to the King, Surgeon-General ANNESLEY CHARLES CASTRIOT DE RENZY, C.B., I.M.S. (retired), and Surgeon-General (ranking as Lieutenant-General) WILLIAM TAYLOR, C.B., honorary physician to the King, Director-General of the Army Medical Service, were each appointed to Knight Commanderships of the Bath. Lieutenant-Colonel PATRICK FENELON O'CONNOR, I.M.S., Fleet-Surgeon JAMES PORTER, R.N., Inspector-General of Hospitals and Fleets DUNCAN HILSTON, R.N. (retired), Inspector-General of Hospitals and Fleets ROBERT GRANT, R.N., Lieutenant-Colonel Sir JAMES RICHARDSON ANDREW CLARK, Bart. (Brevet Major), R.A.M.C. (Medical Staff Corps) and Lieutenant-Colonel GEORGE THOMAS BEATSON (Medical Staff Corps), the Glasgow Companies R.A.M.C. (Volunteers), were each appointed to Companionships of the Bath, and Lieutenant-Colonel T. E. L. BATE, I.M.S., was made a Companion of the Indian Empire.

*South African War Honours.*

The following list of appointments in recognition of services during the operations in South Africa was issued with the Coronation honours list.

Companions of the Bath: Colonel J. D. EDGE, R.A.M.C., Lieutenant-Colonel W. A. MAY, R.A.M.C., Lieutenant-Colonel R. V. KELLY, New South Wales Medical Corps, Lieutenant-Colonel HENRY JAMES MCLAUGHLIN, reserve of officers (late R.A.M.C.); Lieutenant-Colonel C. E. NICHOL, R.A.M.C.; Major H. N. THOMPSON, R.A.M.C.; Major W. H. W. ELLIOT, I.M.S.; and Captain G. LESLIE, medical officer. His Majesty also gave directions for the following appointments in recognition of services in this country, the Mediterranean, and the Channel Islands during the operations in South Africa. Companions of St. Michael and St. George: Lieutenant-Colonel HENRY CHARLESWORTH, R.A.M.C., and Major WILLIAM GRANT MACPHERSON, R.A.M.C. Captain T. W. A. FULLERTON, I.M.S., and Lieutenant-Colonel J. L. POYNDER, I.M.S., were granted the Kaisar-I-Hind gold medal for public service in India.

During the year the King also gave orders for the following appointments and for the grant of the medal for distinguished conduct in the field to the undermentioned officers in recognition of their services during the operations in South Africa:—Lieutenant-Colonel HENRY HALCRO JOHNSTON, R.A.M.C., to be a Companion of the Order of the Bath; Civil Surgeon W. F. TYNDALE and Civil Surgeon E. LANGLEY-HUNT to be Companions of St. Michael and St. George; MAJOR MAURICE PERCY CUE HOLT, R.A.M.C.; Major WILFRED WILLIAM OGILVY BEVERIDGE, R.A.M.C.; and Captain THOMAS CAMPBELL MACKENZIE, R.A.M.C., to be Companions of the Distinguished Service Order, and the following oversea Colonials, Surgeon-Major J. A. DEVINE, 2nd Canadian Mounted Rifles, and Surgeon-Captain H. J. HUTCHENS, Queensland Contingent, also received the same distinction.

For services during the operations in South Africa elsewhere than in that country the following received Companionships of the Order of the Bath:—Lieutenant-Colonel EDMOND MONKHOUSE WILSON, C.M.G., D.S.O., R.A.M.C.; Lieutenant-Colonel WILLIAM JOHNSTON, R.A.M.C. (r.p.); and Brigade-Surgeon-Lieutenant-Colonel ALEXANDER CROMBIE, I.M.S. (retired).

*The Birthday Honours.*

Mr. W. H. POWER, F.R.S., principal medical officer to the Local Government Board, was made a Companion of the Order of the Bath, and Dr. FREDERICK WILLIAM HEWITT, honorary anæsthetist to the King, who was charged with the important office of administering the anæsthetic to His Majesty during his recent operation, was made a Member of the Fourth Class of the Royal Victorian Order. Dr. DONALD JAMES MACKINTOSH was made a Member of the Fourth Class of the Royal Victorian Order; Mr. WILLIAM HENRY WILLIAMS STRACHAN, chief medical officer of the Colony of Lagos, received a Companionship of St. Michael and St. George; Inspector-General of Hospitals and Fleets HENRY CHARLES WOOD, C.V.O., was made a Companion of the Order of the Bath; Dr. JOHN MCNAUGHTON, medical officer of the Scottish Prison Service, was made a Companion of the Imperial Service Order; and Dr. JOHN SHERBURN received the honour of Knighthood.

*Foreign Orders.*

Sir JOSEPH DALTON HOOKER, G.C.S.I., C.B., Surgeon R.N. (retired), late Director of the Royal Botanic Gardens, Kew, received from the German Emperor the Order Pour le Mérite for his distinguished research in science and art; Captain H. E. HAYMES, R.A.M.C., received the decoration of the Medjidieh of the Fourth Class, conferred upon him by His Highness the Khedive of Egypt, authorised by His Imperial Majesty the Sultan of Turkey, in recognition of services rendered by him to His Highness while employed in the Egyptian army; His Highness the Khedive also bestowed on Mr. HARRY CROOKSHANK (Pasha), F.R.C.S. Edin., the Grand Cordon (First Class) of the Imperial Order of the Medjidieh in recognition of his signal services in Egypt; and the President of the Republic of Venezuela conferred upon Dr. OSCAR JENNINGS of Paris the Order of Commander of the Bolivar (Busto del Libertador). Lord LISTER was created on the occasion of the jubilee of his Fellowship of the Royal College of Surgeons of England a Knight Grand Cross of the Order of Dannebrog by the King of DENMARK.

*Medical Men of other Countries.*

Dr. VON BERGMANN, ordinary professor of surgery in Berlin University and director of the university surgical clinic, was during the year invested with the rank of Wirklicher Geheimer Rath (Real Privy Councillor). This dignity, which is the highest of its class in Germany, carries with it the title of Excellency and is as a rule conferred only on great officers of State and persons occupying important positions at Court, very few medical men having been thus honoured. Dr. GUILLEAUME of Spa, who was the medical man in attendance on Her late Majesty Queen MARIE HENRIETTE of Belgium, was created a Chevalier de l'Ordre de Léopold.

*The Victoria Cross.*

Last in order of sequence, though not last in order of merit, we mention two members of our profession whose names for their noble devotion to duty have been added to that distinguished Order—the Victoria Cross—Surgeon-Captain T. J. CREAN and Surgeon-Captain A. MARTIN-LEAKE. Surgeon-Captain T. J. CREAN of the 1st Imperial Light Horse, during the action with De Wet at Tygerskloof, on Dec. 18th, 1901, continued to attend to the wounded in the firing line, under a heavy fire at only 150 yards range, after he had himself been wounded, and only desisted when he was hit a second time and, as it was at first thought, mortally wounded. Surgeon-Captain A. MARTIN-LEAKE of the South African Constabulary, during the action at Vlakfontein on Feb. 8th, 1902, went up to a wounded man and attended to him under a heavy fire from about 40 Boers at 100 yards range. He then went to the assistance of a wounded officer, and whilst trying to place him in a comfortable position was shot three times, but would not give in till

he rolled over thoroughly exhausted. Eight men at this point were wounded and while they were lying on the veldt Surgeon-Captain MARTIN-LEAKE refused water till every one else had been served.

## OBITUARY.

The Annus Medicus which appears in this the last number of THE LANCET for the year 1902 tells of progress and of work in the various departments of medical science. Here, too, we have to chronicle the names and work of those who have finished their time in this world, for the record of those who have worked must be kept no less than of those who are working. Of all the deaths among the medical profession during the year which is just expiring the most notable is that of the eminent pathologist RUDOLPH LUDWIG KARL VIRCHOW who passed away full of years and honours on Sept. 5th. Though the man is gone his work remains and we need not here recapitulate what has been said in our own columns and in those of, we think we may say, every journal in the civilised world.

### *Royal Navy Medical Service.*

We have but few deaths in the senior service to chronicle. On Jan. 18th the death occurred of Fleet-Surgeon WALTER LAWRENCE, R.N. He was a native of Aberdeen and entered the navy in 1841. He served on the west coast of Africa and also on the New Zealand station. JOHN TURNER CADDY, M.D. Aberd., deputy-inspector-general of hospitals and fleets, died on March 21st. He was in his eightieth year and had spent 31 years at sea. He received his medical education by apprenticeship and at Guy's Hospital. Some 50 years ago he took a prominent part in the movement for improving the position of naval medical officers.

### *Army and Indian Medical Services.*

WILLIAM NASH, M.D. Edin., M.R.C.S. Eng., Surgeon-General A.M.S. (retired), died on Jan. 19th. He was educated at King's College Hospital and at Edinburgh University. On entering the army he served with the 72nd Highlanders (Seaforths). He served in the Kurram campaign with Lord (then Sir FREDERICK) ROBERTS, being mentioned in despatches and receiving the medal and clasp. He also served in Egypt under Viscount WOLSELEY, receiving the medal and bronze star. The last office which he filled was that of principal medical officer of Netley. WILLIAM SMITH LUNAN, M.B., C.M. Aberd., though not, strictly speaking, being in either the Army or the Indian Medical Service, served as a surgeon in the Matabele war and was a surgeon-captain in the British South African Police. He received his medical education at Marischal College, Aberdeen. METCALFE JOHNSON, M.R.C.S. Eng., L.S.A., J.P., studied at Guy's Hospital and qualified in 1846. He settled down in practice at Lancaster and in 1852 was given a commission as surgeon to the 1st Royal Lancashire Militia, being subsequently put in medical charge of the regular troops stationed at the depôt. He held strong views on sanitation and was naturally opposed to "the liberty of the subject" being invoked for the purpose of allowing drunkards and others to spread disease and to be examples of wrong-doing. PETER WILLIAM MARRIOTT, M.D. St. And., M.R.C.P. Lond., M.R.C.S. Eng., was educated at Edinburgh Academy and entered at St. Bartholomew's Hospital in 1850. In 1859 he entered the Indian army and was attached to the 1st Madras Fusiliers, now the 102nd Royal Dublin Fusiliers. In 1861 he left the service on account of ill health and during the winter and spring practised at Mentone. He died on Feb. 1st. WILLIAM GUYER HUNTER, K.C.M.G., M.D. Aberd., F.R.C.P. Lond., F.R.C.S. Edin., who died on March 14th, received his medical education at King's College Hospital and qualified in 1849. After graduating at Aberdeen University he entered the Indian Medical Service of the Bombay Presidency. He served through the second Burmese War, 1852–53 and also through the Mutiny. We need not here recapitulate his valuable Indian career, as all the facts will be found in our notice of his death. Not only in India but also in Egypt did he do admirable work. He was besides honorary surgeon to His Majesty the KING and consulting physician to Charing Cross Hospital. JOHN ROBERTS THEOBALDS, formerly of the Indian Medical Service of the Madras Presidency, died on March 7th. He entered the Service in 1848 and retired in 1880 with the rank of surgeon-general. He, too, served through the Mutiny, being engaged in the pursuit of Tantia Topee. ROBERT WHITTINGTON LOWE, M.D. Edin., M.R.C.S. Eng., received his medical education at Edinburgh University and entered the Army Medical Service after graduating in 1863. He served with the 5th Dragoons mainly in the Bombay Presidency, where also he held the post of physician to the Rajah of Sundoor. He volunteered for active service in the Ashanti expedition of 1873–74 and accompanied Sir WILLIAM BUTLER'S column. ALEXANDER E. MARSDEN, M.D. St. And., F.R.C.S. Edin., who died on July 2nd, was born in 1832, entered the army as a staff assistant surgeon in 1854, and served at the General Hospital, Scutari. He was one of the first to enter Sebastopol when the city fell. His life's work, though, was connected with the Royal Free Hospital and with the Cancer Hospital, both of which had been founded by his father, WILLIAM MARSDEN.

### *Hospital Physicians and Surgeons.*

The various hospitals have suffered the usual losses by the deaths of members of their staffs, and perhaps London has suffered greater losses than usual. CECIL LATTER, M.A., M.D., B.C. Cantab., died from a sudden attack of heart failure on Jan. 29th. He received his medical education at St. Thomas's Hospital and settled in practice at Folkestone, where he was elected to the post of physician to the Folkestone Hospital. SEYMOUR GRAVES TOLLER died on Feb. 19th. He was educated at St. Thomas's Hospital and had but just been elected to the post of assistant physician when his health compelled him to resign this post and to go to Cairo. There he was elected physician to the Kasr-el-Aini Hospital, a position which he held until his death. D'ARCY BAINBRIDGE CARTER, M.R.C.S. Eng., L.R.C.P. Edin., who died from pneumonia on Feb. 8th, was educated at Leeds Grammar School and at the old Leeds School of Medicine. He was surgeon to the Sir Titus Salt Hospital, Saltaire. WILLIAM CHARLES HILLS, M.D. Aberd., M.R.C.S. Eng., L.S.A., was educated at Merchant Taylors' School and at Guy's Hospital. In 1861 he was elected to the office of medical superintendent of the Norfolk County Asylum, which post he held until 1887, when he retired on a pension of £600 per annum. LEVI COOPER LANE, M.R.C.S. Eng., the well-known surgeon of San Francisco, founded the Cooper Medical College, in which institution he was professor of surgery, and also the Lane Hospital. He is, perhaps, best known in this country as the founder of the Lane lectureship, which has been held by Sir MICHAEL FOSTER and other prominent British physicians and surgeons. JOHN HENRY ECCLES, M.R.C.S. Eng., L.S.A., studied at St. Bartholomew's Hospital and settling in Plymouth held many important offices in connexion with the town. He was consulting surgeon to the Royal Eye Infirmary and was also medical inspector of emigrants. EDWARD LONG FOX, M.D. Oxon, F.R.C.P. Lond., a well-known physician in the west of England, was educated at Shrewsbury School, Balliol College, Oxford, and St. George's Hospital. He was for 45 years physician and consulting physician to the Bristol Royal Infirmary His death took place on March 28th. ALEXANDER MACGREGOR, M.D. Aberd., M.R.C.P. Lond., who died on April 12th, received his medical education at the University of Aberdeen. After studying at Vienna and Berlin he returned to Aberdeen and was elected physician to the

Aberdeen Dispensary and to the Aberdeen Hospital for Sick Children. He was also assistant to the professor of medicine, but in 1895 he removed to London, where he held the post of physician to the North-West London Hospital for Diseases of the Chest. The cause of his death was angina pectoris. WILLIAM MILLER ORD, M.D., F.R.C.P. Lond., consulting physician to St. Thomas's Hospital, who died on May 14th, was born in 1834. He was educated at King's College School and at St. Thomas's Hospital. He commenced professional life as assistant to his father who was in practice at Brixton. He taught at the hospital when it was in the Surrey Gardens, but on the occasion of the opening of the new hospital he was appointed assistant physician, and in 1871 he became physician. Of his ability as a physician and clinical teacher, of his admirable work in investigating and finally settling the pathology of myxœdema, there is no need to speak further here. THOMAS JAMES WOODHOUSE, M.D. Lond., F.R.C.S. Eng., for many years a highly esteemed practitioner in Putney, was educated at St. Thomas's Hospital. He was for 36 years medical officer to the Royal Hospital for Incurables. JOHN WICHENFORD WASHBOURN, C.M.G., M.D., F.R.C.P. Lond., F.R.C.S. Eng., was educated at King's College, Gloucester, Guy's Hospital, Vienna, and Königsberg. In 1890 he was appointed assistant physician to Guy's Hospital and full physician to the London Fever Hospital, in 1890 also he organised the bacteriological department at the former institution. In 1900 he went out to South Africa as consulting physician to the Imperial Yeomanry Hospital, being also made a C.M.G., and in 1901 he was gazetted as consulting physician to HIS MAJESTY'S forces in South Africa. He was appointed to deliver the Croonian lectures of this year, but on June 20th he died from acute miliary tuberculosis. Of his valuable work in the field of preventive medicine we gave a full account in our notice of his death. JOHN CURNOW, M.D., F.R.C.P. Lond., professor of clinical medicine in King's College, London, and physician to King's College Hospital, was educated by apprenticeship to Dr. DOIDGE and at King's College Hospital. In 1873 he was appointed professor of anatomy at King's College in succession to Professor PARTRIDGE, and in 1874 he was elected, simultaneously with Dr. E. BAXTER, assistant physician to King's College Hospital. The anatomy professorship he held for 23 years, when he relinquished the post to become professor of clinical medicine. A skilled anatomist, an able physician and teacher, a kind friend, and a member of the staff of THE LANCET for more than 25 years, his death was felt by many as a sad loss, but by no one more than by ourselves. ALFRED COLEMAN, F.R.C.S. Eng., L.D.S., who died on August 26th, was educated at St. Bartholomew's Hospital. Being admitted a Fellow of the Royal College of Surgeons of England in 1868 he turned his attention to dental surgery and was for many years dental surgeon to St. Bartholomew's Hospital. NEIL HARRISMITH MACMILLAN, M.B., C.M. Edin., M.R.C.S. Eng., was educated in the south of France and at Edinburgh University. After studying in Vienna he was appointed assistant medical officer to the London County Asylum at Claybury. At a recent meeting of the South-Eastern Division of the Medico-Psychological Association he read a very able paper on Asylum Dysentery, and by a curious coincidence it was to an attack of this disease that he succumbed. DANIEL MACDONNELL, M.A., M.D. R.U.I., who died on Oct. 10th, was educated at Castleknock School, the Roman Catholic Medical School in Dublin, and at the Mater Misericordiæ Hospital. Graduating as M.B. in 1885 he was shortly afterwards appointed to the post of physician at the Mater Infirmorum Hospital. LENNOX BROWNE, F.R.C.S. Edin., M.R.C.S. Eng., who died on Nov. 2nd, was consulting surgeon to the Central London Nose, Throat, and Ear Hospital. Besides being an able laryngologist he was a clever draughtsman and no mean artist in oil and water colours. EDGAR BECKIT TRUMAN, M.D. St. And., M.R.C.S. Eng., who died on Oct. 31st, received his medical education at Guy's Hospital. A skilled chemist, he was elected a Fellow of the Institute of Chemistry in 1895. He practised in Nottingham and was surgeon to the Nottingham Samaritan Hospital for Women and to the Nottingham Eye Infirmary. HENRY MARTIN JORDAN, F.R.C.S. Eng., L.R.C.P. Lond., was for some time lecturer on anatomy and surgery at the Nizam of Hyderabad's Medical School, Hyderabad, Deccan. He played football for Wales in international matches in 1884 and 1889. SAMUEL FENWICK, M.D. St. And. and Durh., F.R.C.P. Lond., who died on Dec. 11th in his eighty-first year, was formerly senior physician to the London Hospital. He retired from work on the active staff in 1896. He was the author of that excellent work, "The Student's Guide to Medical Diagnosis," and wrote much upon the subject of diseases of the stomach. THOMAS SHAPTER, M.D. Edin., F.R.C.P. Lond., who died in December, aged 94 years, was formerly physician to the Devon and Exeter Hospital. In 1832 he rendered valuable services during the cholera epidemic and in 1847 he served the office of mayor of Exeter. JOHN LOWE, M.D. Edin., M.R.C.S. Eng., was formerly consulting surgeon to West Norfolk and Lynn Hospital. He attended the PRINCE of WALES (now His Majesty the KING) during his attack of typhoid fever in 1871, and with Mr. (afterwards Sir) OSCAR CLAYTON was the first to suspect the true nature of the disease. He received the appointmet of physician extraordinary to H.R.H. the PRINCE of WALES and afterwards to the KING. He died on Dec. 12th.

*State and Municipal Officials.*

Among the names of medical men who served their fellows in other than a purely professional capacity we may mention those of the following. HENRY LANKESTER, M.R.C.S. Eng., L.S.A., was a native of Poole, but settled in practice at Leicester. In 1879 he became a member of the town council and in 1890 he was elected mayor. In 1892 he was made a justice of the peace. WALTER WYKESMITH, M.R.C.S. Eng., F.R.C.S., L.R.C.P. Edin., was for many years in practice at Wimborne. To him Wimborne mainly owed its water-supply, for the Wimborne Water Company was due to his inception. He was also a member of the governing body of Wimborne Minster and a prominent Freemason. JAMES SCARBOROUGH LOE, M.R.C.S. Eng., L.S.A., who practised for nearly 50 years in Leeds, was honorary surgeon to the Fever Hospital, a city councillor, and an alderman. He was chairman of the city hospitals' committee and also of the sanitary committee. JOHN PERMEWAN, L.R.C.P. Edin., of Redruth, was one of the originators of the West Cornwall Women's Hospital. He took a great interest in all local matters and at his own expense erected seats for weary wayfarers and invalids in the outskirts of Redruth. JAMES THOMAS WARE, F.R.C.S. Eng., took an active part in founding the Metropolitan Convalescent Institution, and was for some time after he retired from practice chairman of the Farnham Union board of guardians. WILLIAM ALEXANDER, M.D., C.M. Glasg., J.P., lived through five reigns and spent nearly the whole of his life in his birthplace, the village of Dundonald. He was a justice of the peace for the county of Ayr. JOHN MANLEY, J.P., M.R.C.S. Eng., L.S.A. Lond., practised for many years at West Bromwich, was medical officer of health, and was a justice of the peace for the district.

*Distinguished Foreign Medical Men.*

Of eminent medical men who have this year passed away and who belong to other nationalities than our own we must again refer to him who stands first in age and honours—namely, to VIRCHOW. Others whom science and medicine have lost are HUGO VON ZIEMSSEN,

professor of clinical medicine in the University of Munich; ADOLF KUSSMAUL who died at Heidelberg and who had filled professorial chairs at the Universities of Strasburg, Freiburg, Erlangen, and Heidelberg; and EDOARDO PORRO, the eminent Italian obstetrician and gynæcologist, who died on July 18th from chronic septicæmia originally set up by a poisoned wound of the hand, received during the course of an operation. His work is known to all medical men and it was on May 21st, 1876, that he published his celebrated memoir on "Porro's Operation." LEOPOLD SCHENK, who died on August 18th and who was formerly a professor at the University of Vienna, was well known in connexion with his theory with regard to the determination of sex. BAREND JOSEPH STOKVIS, professor of medicine in the University of Amsterdam, who died suddenly on Sept. 20th, was by common consent the most eminent physician in Holland; and FRANCESCO OCCHINI, who died on Nov. 19th, was a prominent surgeon of Italy and held the chair of surgical anatomy and operative surgery in the metropolitan school of medicine at Rome.

*Other Practitioners.*

Among the names of other practitioners whose deaths have been noted in our columns we may again refer to the following. EDMUND GWYNN, M.D. St. And., M.R.C.S. Eng., who died in Egypt on Jan. 27th, was for 2½ years medical officer of the parish, afterwards the borough, of Hampstead. He was President of the Society of Medical Officers of Health and at the close of his term of office was elected vice-president and treasurer of the society. SAMUEL ROBERT LOVETT, L.R.C.P. Edin., L.R.C.S. Irel., L.S.A. Lond., was educated at King's College Hospital and was for many years medical officer of health of the parish of St. Giles-in-the-Fields. He was instrumental in bringing about great clearances of slum property in his district. SAMUEL ALEXANDER KENNY STRAHAN, M.D. R.U.I., who died on Feb. 21st, was a well-known Irish alienist and for a long time held the post of senior medical officer of Berrywood Asylum. JOHN JAMES TWEED, F.R.C.S. Eng., L.S.A. Lond., was born in 1819 and practised in Upper Brook-street for 60 years. JOHN BARCLAY, M.B., C.M. Aberd., practised in Banff and from 1880 to 1883 was one of the examiners at Aberdeen University. GEORGE FOWLER BODINGTON, M.D. Durh., M.D. Giessen, M.R.C.P. Lond., F.R.C.S. Eng., was the son of George Bodington of Sutton Coldfield, the pioneer of the open-air treatment of tuberculosis. The younger Bodington practised at first in Pietermaritzburg and afterwards in Kenilworth, where he remained until he moved to Sutton Coldfield to take charge of an asylum. Eventually his health gave way and he went out to British Columbia, finally settling in Paris, where he died. EDMUND DELAFOSSE BOND, M.A., M.B., B.Ch. Oxon., was a promising young physician who died from scarlet fever which he had contracted in the course of his duty as resident assistant house officer at St. George's Hospital. CHARLES WILLIAM CHUBB, M.R.C.S. Eng., L.S.A., who died in his eighty-third year, practised in Torpoint, where he worked single-handed through the cholera epidemic of 1849. He was a staunch Churchman and when vicar's warden was helpful in getting the chancel of the parish church built. FRANCIS MANLEY SIMS, F.R.C.S. Eng., was for many years a prominent practitioner in Mayfair. He was physician to H.R.H. the Duke of CAMBRIDGE. He died on Dec. 9th in his sixty-first year. HUGH JAMES LLOYD, L.R.C.P. Edin., L.F.P.S. Glasg., L.S.A., J.P., was an old and well-known practitioner of Barmouth. He died on Nov. 24th in the sixtieth year of his age. For 30 years he held the office of churchwarden at St. John's Church, Barmouth. He was also for many years a justice of the peace for the county of Merioneth. JOHN LLOYD, M.B. Lond., M.R.C.S. Eng., who died on Dec. 1st in his seventy-sixth year, was a well-known practitioner in Birmingham. He leaves two sons, one of whom is Mr. JORDAN LLOYD. We must further mention the names of two others who, though not medical men, were closely associated with the medical profession—namely, HENRY GEORGE MADAN, F.C.S., for 20 years the kindly and admirable teacher of chemistry at Eton, and WILLIAM MARTINDALE, F.C.S., F.L.S., the well-known pharmaceutical chemist.

Here, then, we close the record for 1902 of those who have passed from amongst us. In no profession so much as in our own do men come daily face to face with death and perhaps its very familiarity is the reason why so few medical men have written on the subject of death. We can only call to mind Dr. MEAD'S curious commentary on Ecclesiastes xii., Sir THOMAS BROWNE'S "Hydriotaphia" and possibly we may include Dr. MUNK'S "Euthanasia." But the year just ended has seen a reprint of the edition of 1638 of a work written by one who belonged to that profession which is generally esteemed anything but sentimental or spiritual—namely, that of the law. We refer to "Manchester al Mondo, a Contemplation of Death and Immortality." The author of this work was Sir HENRY MONTAGU, first Earl of Manchester, some time Chief Justice of the King's Bench, and we cordially commend it to everyone who delights in style, in high thinking, and in antithetical musical English, if somewhat Latinised. Take, for example, the following passage:—

> Seeke not consolation against death, but let death be thy consolation; Comforter is his name: In death there is consolation against death. *Mortem optare malum, timere pejus:* But to make death easie, look thorow death at glory, think not so much of death as of the glory that followes it: at the worst, *Mors non aufert vitam, sed in melius transfert;* life gives way to death and makes way for it. If it be sharpe for the time, *Puer es, si mavis manere insanus, quam medicinam sustinere amaram:* A man will easily swallow a bitter pill to gaine health. The Physician helps us not without paine, and yet we reward him for it.

# Annotations.

"Ne quid nimis."

## THE BACTERIAL TREATMENT OF LONDON CRUDE SEWAGE.

THE results obtained on an experimental scale in the settling tanks and coke beds at Barking and Crossness would seem to warrant without delay the commencement of the treatment of London sewage by bacterial methods. In the fourth report on this subject just issued by Professor Frank Clowes, D.Sc., F.I.C., the chief chemist to the London County Council, the following points are considered to have been established by the experimental work so far undertaken:—"1. That by suitable continuous undisturbed sedimentation the raw sewage is deprived of matter which would choke the coke beds and the sludge which settles out is reduced in amount by bacterial action to a very considerable extent. This reduction might undoubtedly be increased by the preliminary removal of road detritus. 2. That the coke beds after they have developed their full purifying power by use have an average sewage capacity of about 30 per cent. of the whole space which has been filled with coke. 3. That the sewage capacity of the coke bed when the bed is fed with settled sewage fluctuates slightly, but undergoes no permanent reduction. The bed does not choke and its purifying power undergoes steady improvement for some time. 4. That coke of suitable quality does not disintegrate during use. 5. That the 'bacterial effluent' of settled sewage from the coke beds does not undergo offensive putrefaction at all, even in summer heat, and can never become offensive. That this effluent satisfactorily supports the respiration of fish. 6. That the

use of chemicals is quite unnecessary in any circumstances when the above method of treatment is adopted." Obviously if it is decided to employ this method the construction of the necessary works for the purpose and the expenditure thereby involved will be considerable and the citizens of London will be face to face with another important item of cost connected with a huge sanitary problem—viz., the satisfactory disposal of metropolitan sewage. On the other hand, it is evident that owing to the increased abstraction of water by the water companies both at their existing intakes and at the newly constructed reservoirs for storm water at Staines a large portion of the lower river will necessarily stagnate; in other words, the normal flush of the river must be seriously diminished. It is remarkable that after all the animated discussions which have turned upon the disposal of metropolitan sewage coke beds under proper treatment should promise to offer a satisfactory solution of the difficulty.

## HYGIENE IN THE ARCTIC SEA.

ONE of our Italian correspondents writes under date Dec. 18th: "All Italy—literary as well as scientific—is perusing or discussing the narrative just issued by the Duke of the Abruzzi, in which His Royal Highness gives his personal experiences of life and exploration in the Arctic zone, followed by the report of Captain Cagni, commandant of the *Stella Polare*—the ship of the expeditionary party—on a sledge journey from Teplitz Bay to the highest degree of latitude yet reached, and wound up by the medical 'relazione' of Dr. Achille Cavalli Molinelli on the hygienic aspects of the expedition as a whole. The fascinating volume, well written throughout and containing 210 illustrations in the body of the text, 26 tables, two panoramic views, and four maps, deals with incidents and observations covering most of the years 1899-1900, and already, as I have said, has found its way into all the intellectual circles of Italy, preparatory to its finding the larger public for which translations into the chief European languages will be provided. Meanwhile a few excerpts from Dr. Cavalli Molinelli's report may not be unwelcome to the English reader whose interest, always active in those latitudes, has of late years been whetted by the experiences of Captain Albert Hastings Markham (1875-76), of Lieutenant Lockwood (1884), and still more recently of Nansen and Sverdrup. To begin with, Italians have always shown themselves capable of enduring not only a very high but also a very low temperature—the latter fact made memorable by Baron Larrey, surgeon-general to the Emperor Napoleon's 'Grande Armée' in the disastrous retreat from Moscow in 1813, when of all the contingents Murat's 10,000 Neapolitans were found to have suffered least not only from the physical privations common to the whole army but even from the cold which was as prolonged as it was intense. This observation of the French surgeon is confirmed by Dr. Cavalli Molinelli, according to whom the health of all on board the *Stella Polare* was excellent—the only exceptions being the Duke himself and Commandant Cagni, whose scientific zeal so outran their prudence that they suffered severely from frostbite, resulting, in the Commandant's case especially, in lesions affecting the hands and even costing him several fingers. Increase of weight during the winter was observed in a number of the party, who felt greatly better than in their native Italy. Constipation, from which they suffered habitually at home, they quite got rid of, although they had often to pass (without taking special precautions) from 15° or 18° above zero in their tent to 35° or 40° below it in the open. Dr. Cavalli Molinelli attributes this result to the absolute purity of the atmosphere, 'priva di pulviscolo' (without dust), and calls attention to the fact that more than one of these subjects when nearing the coast 'was seized with a sudden and continuous desire to expectorate.' The rigorous limitation of fermented liquors in the dietary and the prohibition of distilled alcohol had also their invariable effect in maintaining the health of the party. 'Procuring, very wisely, the maximum production of caloric from a source more lasting and more trustworthy than the ingestion of a small quantity of alcohol, and always alive to its noxious effects on important organs of the animal economy, particularly on the gastric mucosa and the liver,' Dr. Cavalli Molinelli allowed no cognac, rum, or whisky to be taken except on rare and special occasions as a condiment or as medicine. 'Wine,' he continues, 'was conceded only in small quantity at supper—about 120 grammes of "barolo" (a dark-red "blood-making" wine) or 60 grammes of port.' The good results from this regimen were conspicuous, he adds, not only in the excellent hygienic conditions above referred to, but also in the temper of the party, alacrity and cordiality always prevailing among the subalterns. Nor was it only among those of Italian nationality that these effects were seen. The Norwegian contingent, inured more or less to the ingestion of alcohol and using beer as a constant beverage at home, were manifestly better for the abstention from these drinks as practised on board the *Stella Polare* and on the sledge journeys. Dr. Cavalli Molinelli congratulates his compatriots on the resisting power they display to extremes of temperature, whether in Somaliland or in the regions of perpetual ice—a power they can still further develop with the knowledge gained from experience. One practical hint he brings into strong relief—the superiority in Arctic life of woollen clothing over furs. The former admitted of a rapid and steady expulsion of the perspiratory products engendered by fatigue or exertion, while the latter retained them—to the wearer's discomfort and eventually to his malaise."

## A CORONER'S COMMENTS.

A CASE of accidental death under anæsthetics and the inquest thereupon have recently given rise to much feeling and expression of opinion among the medical men at Bournemouth. As several points of both medical and medico-legal interest are involved we may briefly outline the circumstances. A young man, who had already been recently operated upon for fluid within the chest and who had had two attacks of appendicitis within the last six months, underwent another operation for the relief of a suspected large abscess in connexion with the vermiform appendix. After a few days' comparative relief another operation was found to be necessary. Due care was paid to the extremely unfavourable general condition of the patient, but Dr. Arthur Ransome, Dr. T. Frederick Gardner, and Mr. A. Heygate Vernon were of opinion after three consultations that an operation was absolutely necessary. The patient was suffering, they believed, from septic absorption and an operation might obviate this. The A.C.E. mixture was being administered prior to the operation when the patient succumbed to heart failure. The purely medical interest of the case ends here and though we do not propose to examine this at all in detail we may remark that in a case of this sort where death occurs under an anæsthetic, the patient being already near death's door from other causes, blame must not be too hurriedly or too entirely cast upon the anæsthetic. The question must be asked, supposing no anæsthetic had been used at all and the necessary operation had been performed would not death equally have occurred? With the consent of the patient's friends the medical men present at this case conducted what may be described as a partial post-mortem examination. Apparently, that is to say, the existing abdominal wound was sufficiently enlarged

to allow of the exposure of some perforated bowel in the region of the appendix. Within an hour of the death the coroner is informed by Dr. Gardner. The patient's friends appear to have thought that a certificate would be given and that an inquest would not be held. At the inquest the coroner threw blame upon the medical men concerned for allowing such an impression to exist. He also did not appear to have appreciated the prompt information afforded to him by Dr. Gardner. The giving of this information, of course, at once negatives any idea of a desire to avoid an inquest. The medical men naturally knew that in such cases an inquest must be held, but they did not, perhaps, make the fact plain to the parents who had no such knowledge. It was this lack of explicitness which the coroner in his remarks at the inquest referred to as "bungling on the part of those concerned in the case." His remarks, too, on the fact of an examination after death having been made appear in the light of the law on the matter to be unnecessarily severe. Legally, such a step, with the consent of the patient's relatives, is perfectly permissible, the only reservation being that no fee is to be paid. As an inquest, however, was bound to be held the judiciousness of making such a preliminary examination is certainly open to question.

## TREATMENT OF JURIES IN CASES OF MURDER.

A CORRESPONDENT writes: It is the common, if not the invariable, practice to seclude the jurymen trying a murder case from the time they are sworn in until they have delivered their verdict, and this seclusion not infrequently extends over several days. It appears that at the recent Old Bailey sessions one of these juries had to be detained all night at an hotel in charge of two officers of the court. In the matter of refreshment and in the endeavour to promote the general comfort of their unwilling visitors there was nothing to complain of on the part of the hotel management. It is to the barbaric arrangements made for the night accommodation that attention must be drawn. It was at first proposed to put the twelve jurymen and the two court officials to spend the night in one extemporised dormitory, but this proposal was afterwards modified to the extent that two of the men were put into an adjoining room. Now it is well known that petty jurymen at the Central Criminal Court are drawn from all sorts and conditions of men, and the indecency of herding twelve such men together in one room all night is a public scandal. It is bad enough for men to be dragged from their avocations for eight or ten days, often at great personal inconvenience, without outraging the common decencies of life. Surely during the Old Bailey Sessions some hotel might be subsidised to hold twelve rooms in readiness for such an emergency.

## THE PREVALENCE OF SMALL-POX.

THE Local Government Board for Scotland intimates that during the period from Dec. 1st to 15th inclusive six cases of small-pox have been notified to it, five of these occurring in the burgh of Dundee and one in the burgh of Edinburgh. The various reports on the recent epidemic of small-pox from different medical officers of health which are from time to time submitted to us show one fact with a simple uniformity—namely, the very great protection from death from small-pox afforded up to the age of from 10 to 15 years by efficient vaccination in infancy. We have already referred to this point in THE LANCET of Nov. 15th, p. 1339, and Dec. 13th, p. 1643. Thus in the report of Dr. Francis J. Stevens, medical officer of health of the borough of Camberwell, we find that in all 366 cases were notified; of these, 240 had been vaccinated, 9 had been vaccinated and revaccinated, 107 were unvaccinated, and 10 showed "no marks." Of the 240 vaccinated 12 under 10 years of age were attacked and 3 died; of the 107 unvaccinated 63 were attacked at the same age period and 27 died. Of the vaccinated cases 180 over 20 and under 60 years of age were attacked and 22 died, while of the unvaccinated at the same age period 16 were attacked and 3 died. Not one vaccinated and re-vaccinated case died at any age.

A SPECIAL meeting of the South-West London Medical Society will be held at the Drill-hall, Clapham Junction, on Friday, Jan. 2nd, 1903, to consider the course to be pursued in view of the attitude adopted by Mr. Troutbeck, the coroner for the district, towards the local practitioners of medicine. All members of the medical profession are invited to be present.

A BRIEF paragraph will be found at the head of the column dealing with Service matters (see p. 1801) which details the new rates of pay for officers of the Royal Army Medical Corps serving in India.

THE President of the Local Government Board has agreed to receive a deputation of the Imperial Vaccination League on Jan. 14th, and hear the views of the league upon forthcoming vaccination legislation.

AT and after midnight of Jan. 6th, 1903, the order made by the London County Council on Nov. 7th, 1902, concerning the notification of chicken-pox, will expire.

# ARMY SANITATION AND ENTERIC FEVER.

IT is getting on for nearly half a century since a series of masterly articles appeared in the columns of THE LANCET from the late Dr. William Budd on the subject of typhoid fever, and it was in reference to them that the late Professor Edmund Parkes wrote in the army medical report for 1860 that the occurrence of this disease pointed unequivocally to defective removal of excreta, and added that it was altogether preventable and should disappear from sick returns. Universal experience, however, still seems to show that wherever large numbers of men are drawn together and whether an army occupies an Indian cantonment, encamps, or marches over the plains of India or the mountains of Afghanistan, the arid soil of the desert or the veldt of South Africa, typhoid fever is destined to dog its steps. As the cause of the disease is specific and cannot be generated *de novo* it can only be assumed that the troops brought it with them—no unlikely assumption, it will be readily admitted. Nor is this humiliating experience confined to the British army or to our own time; it is incidental and extends to all armies. Notwithstanding all our scientific researches and labours the causation of this fever and the way to prevent it are still the great problems to be solved by the army sanitarian. It is easy to understand that the chances of excremental pollution in some form or other are necessarily multiplied and increased under the exceptional and abnormal conditions of army life. But that the distinction is so frequently ignored it might seem almost a platitude to say that the subject of the prevention of typhoid fever assumes a very different aspect when it has to be simply dealt with in a paper or discussed at a scientific society from that which it does when it has to be considered in connexion with the conditions that present themselves in war and on field service. That is no reason, however, why the question in the last-named circumstances should not be thoroughly discussed with a practical end in view. Quite the contrary, and we think now that the South African war is over and the facts are still fresh in the mind that no better or wiser step could be taken by the War Office authorities than the appointment of a small, carefully-selected committee for that purpose. Meanwhile we may usefully reconnoitre the position with the view of seeing how we stand at the present time in respect of this the most important, because most prevalent, of all camp diseases.

We have recently had two very valuable contributions before us, one following very closely on the heels of the other.

The first deals with the matter from the positive side, consisting of a minute and searching inquiry into facts and figures, clinical histories and practical details; the other is from the experimental and scientific side and studies the viability, changes, and movements of the typhoid fever bacillus under several conditions outside the body. These conditions have been purposely selected as illustrative of those which actually occur or are very likely to occur in army life. The two papers in question are supplemental and complemental of one another and have an important bearing upon each other. We allude to an abstract from the "Report on the Typhoid Fever Epidemics in the Volunteer Camps of the United States Army" in 1898 and a paper by Major R. H. Firth, R.A.M.C., and Major W. H. Horrocks, R.A.M.C., entitled "An Inquiry into the Influence of Soil, Fabrics, and Flies in the Dissemination of Enteric Infection." There is no need to recapitulate their main points, with which we may assume our readers to be already acquainted; nor need we seek to solve the riddle of the exact relation between the typhoid and colon bacilli, but may content ourselves with accepting in the meantime those bacilli which respond to all the known bacteriological tests as the true and only cause of enteric fever. Our purpose now is a concrete and practical one and circumscribed within the limits of inquiring whether anything can be done from a sanitary point of view in dealing with this very intricate problem of typhoid fever and of the other diseases incidental to armies and in what directions?

It strikes us that the first thing to be done is to return to the principle which was so emphatically recognised in Lord Herbert's time after the Crimean war with the view of devising an army sanitary system and organisation suitable for war service. We entirely concur in what has been said in the report of the Royal Commission on South African Hospitals on the subject of sanitation. Any system of sanitary organisation should consist of a responsible directing and properly trained sanitary staff to advise and to lay down what has to be done and of a subordinate executive to carry out its orders. The functions of such a sanitary corps would embrace everything appertaining to the sanitation of the troops on field service, such as selection and periodical change of the sites of camps, conservancy, the cleanliness of camps, water-supplies, drainage, disinfection, system of sanitary police, and so forth. We know, of course, that there is, and always must be, a wide difference between civil and military conditions. If a foe gave some intimation of his intended movements beforehand and did not begin to fight until both sides were ready, and if there were no surprises and forced marches, matters would be materially simplified. Time, again, is an essential matter in the application of even the most elementary sanitary laws and in war there is usually "no time."

As regards the typhoid fever of armies, we are at once confronted with the water-borne theory. If this no longer holds the exclusive position which it once did it must nevertheless be admitted that water supplies present a means of diffusing the disease such as cannot be ascribed to any other agency and they are, as a matter of fact, a very frequent cause of the epidemicity of enteric fever. In a campaign no dependence can be placed upon the source and purity of the water-supply; it is always in the interest rather than otherwise of the enemy to cut it off or to foul it. It follows, therefore, that if an army is to be safeguarded against contaminated water and supplied with that which is wholesome steps must be taken to that end or recourse must be had to the use of sterilised water. Our readers may be already acquainted with what Dr. H. Leigh Canney has said on this subject and with the practical method which he has advocated for insuring a supply of boiled water to troops on service. If not they will find a recapitulation of his arguments in our columns this week at p. 1742. In the United States Army the Waterhouse-Forbes sterilising apparatus is used to the same end. Whether these methods are practicable and could be carried out on active service or not are questions which must be settled by the military authorities. We need say nothing about the importance of the object in view, for it must be obvious to all. In the absence of any trustworthy data it is futile to attempt to estimate what is the proportion between the amount of water-borne typhoid fever as compared with that caused by other sources of infection, but it may be said that all explosive outbreaks and sudden, rapidly-developed epidemics of that fever may probably be regarded as examples of water poisoning on a large scale. But it seems certain, if we are to accept the conclusions of the United States commission and the results of the experimental investigations conducted at the Netley laboratory, that there are many other sources of infection besides water which may give rise to attacks or even epidemics of typhoid fever. That the typhoid bacillus is much more widely distributed and capable of surviving under a variety of conditions, and that the disease manifests itself and is maintained and propagated in many more ways than was formerly supposed seems certain. Disinfection of the excreta, alvine and urinary, if of admitted efficacy is nevertheless attended with the difficulty that as the early detection of the disease and the determination of the time when it ceases to be infective are alike problematical it is not easy to fix the limits within which such disinfection should be carried out or always to guard against the possible introduction of the disease. Speaking generally an increased knowledge and interest in army sanitation on the part of the officers, non-commissioned officers, and men of the army are much to be desired. The subject is a large one, but we trust that we have said enough to indicate its importance and to show that in the interest of the army and everybody concerned it requires to be as earnestly and deliberately considered as it deserves to be.

## LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

*Continued Increase of Small-pox in Liverpool.*

THIRTY-FOUR cases of small-pox were notified during the week ending Dec. 13th, as against 18 cases in the previous week. There are now 116 cases of small-pox in the city hospitals. The medical officer of health (Dr. E. W. Hope) lays stress upon the fact that some of the cases recently reported were amongst the lowest and most migratory class of tramps. These were taken from common lodging-houses, from the tramp wards of workhouses, or from the gaol. In each case it was shown that the patient had been in contact with a considerable number of other persons. In regard to the tramp wards there were over 100 occupants of the same ward, some of whom had dispersed to different parts of the country before the presence of small-pox was discovered, but as many as would submit to the operation were revaccinated, and in accordance with the instructions of the Health Committee each tramp who was revaccinated received 2*s.* 6*d.* With regard to the common lodging-houses revaccination was performed in as many cases as would submit, 2*s.* 6*d.* being given in each instance. Dr. Hope has been in communication with the prison surgeon and he understands that all short-time prisoners are now revaccinated on arrival at the gaol. So far only two cases of small-pox have occurred in the gaol, but the connexion between the gaol cases, lodging-houses, and the tramp wards has been established in several instances. All the patients were removed to hospital. As on previous occasions, medical assistance has been engaged to vaccinate and to revaccinate in the vicinity of the outbreak and an additional staff of inspectors has been employed. With regard to vaccination, it is very significant and important to note that in Robsart-street and neighbourhood, where so many cases of small-pox were discovered a fortnight ago, no fewer than 23 children, whose ages ranged from two to 12 years, and one adult were found never to have been vaccinated. At one of the public-houses which is largely frequented several cases were reported, giving rise to an additional element of risk. A discussion took place at a recent meeting of the Health Committee in reference to placing vaccination under municipal instead of Poor-law control; and the existence of the class of people referred to above was a strong argument in favour of the proposal.

*"At Home" at the Town Hall in Honour of Major Ronald Ross, C.B., F.R.S.*

The Lord Mayor and the Lady Mayoress gave an "at home" at the town hall on the evening of Dec. 22nd, to meet and to congratulate Major Ronald Ross, C.B., F.R.S., late I.M.S., on his having been awarded the Nobel prize in Medicine. Speeches were delivered in the large ball-room at 9 P.M., after which dancing took place till midnight.

*The Hospital for Consumption.*

The committee of the Hospital for Consumption has issued

a fresh appeal for subscriptions in aid of the sanatorium at Delamere Forest. Mr. W. P. Hartley, one of the two philanthropists who built the sanatorium, has offered to extend it greatly by increasing the accommodation from 40 to 60 beds, on condition that an adequate maintenance is provided. The object of the appeal is to obtain the necessary funds.

Dec. 22nd.

## IRELAND.

(FROM OUR OWN CORRESPONDENT.)

### *The Student of the Present Day.*

AN interesting question is being discussed in some of the Belfast papers, "Are our colleges turning out the same class of men now as formerly?" suggested by two admirable addresses delivered by Serjeant Dodd, K.C., and His Honour Judge Shaw, K.C., at Queen's College, Belfast, on Dec. 12th. The former gentleman delivered a most brilliant and feeling eulogy on his friend and college companion, the late Professor S. J. MacMullan, M.A., whose portrait he unveiled, while the latter gave a most suggestive paper entitled "Reflections of an Old Student" before the Literary and Scientific Society. In both addresses there were constant references to the men of former times who frequented the College, and in commenting on these addresses the public press seems to hint that the same class of men are not being turned out now. The "destruction by a treacherous Government of the Queen's University" was given by one of the commentators as a local cause, but there are probably two other reasons: first, the present ridiculous mania for athletics, golf, and sport, and the conviction that when he is not studying amusement is the chief end of man; and secondly, the blight of the pervading examination system. Men read the books in any set course and never study anything outside that; they do not, as in former times, read literary works for their own sake; they know nothing of the study of literature in its proper sense—"the knowledge of the best that has been thought and said in the world." Judge Shaw told a story of a Cambridge graduate, a candidate for holy orders, having studied theology at Lichfield, who had never heard of Ben Jonson or of Dr. Johnson's Dictionary. Evidently the "Rambler," "London," and "Boswell's Life" were not in the course.

Dec. 22nd.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *The Therapeutics of Colloidal Silver in Infectious Diseases.*

AT the meeting of the Hospitals Medical Society held on Dec. 12th M. Netter read a paper dealing with some results which he had obtained from the use of colloidal silver in infectious diseases. Colloidal silver, or "collargol," is an allotropic form of silver which is soluble in water or in the fluids of the organism, and was introduced into therapeutics by Crédé in 1897. It is generally administered by friction in the form of an ointment of a strength of 15 per cent., Crédé's ointment. The dose is, one, two, or three grammes, administered by friction in the case of an infant, an adolescent, or an adult respectively. It can also be given intravenously by injection, the strength of the injection being from ½ to 1 per cent. The quantity of collargol given thus may vary from three to five centigrammes. There is no danger of poisoning, for a rabbit easily bears 10 centigrammes given intravenously and a horse one gramme. M. Netter gave particulars of some cases in which he had employed this remedy. One was a case of suppurating cerebro-spinal meningitis, one a severe case of pericarditis, one a suppurative pneumonia, one a severe case of scarlet fever, two were cases of septic diphtheria, three were cases of adynamic typhoid fever, one a case of acute ulcerative tuberculosis with broncho-pneumonia, and one a case of generalised pyæmia. Notwithstanding the good results obtained in these cases M. Netter reminded his audience that collargol is not infallible. Its use does not preclude that of other remedies, but it certainly is a valuable drug. Its bactericidal power is feeble, for a 1 in 30 solution took 10 hours to kill the staphylococcus aureus. It has, however, a marked inhibiting action, for a 1 in 6000 solution stayed the development of the staphylococcus aureus in a culture. In experimental infections collargol generally fails and experimental pathology has as yet thrown no light on the mode of action of collargol. M. Netter concluded by saying that the action of the drug was up to now but little understood; but yet that it has a favourable action in many diseases is certain and its use is thereby indicated.

Dec. 22nd

## EGYPT.

(FROM OUR OWN CORRESPONDENT.)

### *The Drainage of Alexandria.*

THE history of this question is instructive though disappointing. Some 30 years ago the export merchants of Alexandria formed the Paving Commission, which was supported by a voluntary tax, and spent for a time some £30,000 a year on the improvement of the town. Their original idea was to pave the streets of the commercial quarter, but having done this they extended their operations to other parts of the town and paved many of the principal streets. They also determined that before paving a street they would build a drain to get rid of the surface water. These drains were never intended for anything but surface water, and when the authorities allowed sewage to flow into them they became hopelessly insanitary. So long ago as since 1885 commissions have been sitting to establish drainage for Alexandria, but though the country has grown rich and the Government stable nothing of any importance has yet been done. Mr. Cornish, the director of the Alexandria water-works, has lately again written to point out the impossibility of a satisfactory drainage of the low-lying quarters of Alexandria by gravitation. The two points which require to be settled are: Is the sewage to be discharged into the sea, or is it to be delivered inland for irrigation? and again, is the system to be the combined or the separate method? There are plenty of officials in this country who might settle these two points for the Egyptian Government, after which an expert from Europe might be summoned if necessary. The method so far adopted both in Cairo and Alexandria as regards drainage has been to decide that the local authorities are not sufficiently experienced to settle the question, so experts are brought from Europe at great expense and eventually their advice is not adopted. The rainfall of Alexandria amounts to nine or ten inches in the year and Mr. Cornish tells us that the town has recently used more than 30,000 tons of water in a day besides 16,000 tons in the suburb of Ramleh. More than 99 per cent. of this water is used for other than drinking purposes. He believes that the best solution will be an entirely new system of drains on the "separate" principle and that the sewage must be got rid of by pumping it, but that all the pipes underground must be of cast iron with soft leaden joints.

### *Improvement in Schools.*

Besides the Government schools which have often been mentioned in these columns there are a large number of elementary schools called *kouttabs* which are under the control of the Wakfs or Ecclesiastical Commissioners. 80 of the Cairo *kouttabs* have been transferred to the Education Department, with the result that granular ophthalmia, which originally affected 96 out of every 100 children, can now be found in only 74 per cent. Filtered water is supplied to the scholars, some of the school buildings have been better ventilated, and the teachers, instead of being blind, illiterate men, are now obliged to pass an examination. But this is only a beginning and much remains to be done when the Government can be persuaded seriously to tackle the question of universal education of the people.

### *The Oases of Egypt.*

The Geological Survey of the Egyptian Government has lately reported on several oases on the east of the Sahara desert. They, of course, differ considerably in size and fertility; the Kharga oasis is about three times as large as the Isle of Man, while the Farafra depression in the desert plateau is about 120 miles from north to south and 56 miles

across. The oases generally have high escarpments, sometimes of dazzling white chalk, the rocks are mostly of the cretaceous period, and the lower clays carry the water from the Nile valley and pour it into the oases in the form of springs which may be hot, cold, mineral, or gaseous. The springs are generally numerous and may be divided into three classes: (1) overflow springs, (2) stagnant pools, and (3) sanded-up springs. The overflow springs used for cultivating the land issue from little eminences and are found as high as 260 feet above sea level. They are sometimes brackish, varying in temperature, and often contain iron and carbonic acid gas. The inhabitants of the oases have the greatest objection to labour and only cultivate the minimum of land required to support the population. The stagnant pools are used for washing clothes in and for drinking purposes. The sanded-up springs are the result of the blown sand and to clear them it is only necessary to bore for a yard or two, but this involves too much labour for the inhabitants. Those of the oases which are abundantly supplied with water have many swamps and marshes and malarial fever is very prevalent especially in the summer and autumn. The population of the Kharga oasis is about 8000. Lazy and ignorant, weakened by fever, the people live on the least possible amount of food, work, and reasoning power. The chief crops are wheat, barley, maize, rice, onions, and dates. The fauna are the grey fox, gazelles, vultures, snakes, beetles, butterflies, moths, and various insects. A Government medical officer is provided for the larger oases, but as this involves banishment with no chance of private practice the Government officials have come to look upon an oasis appointment as something akin to punishment.

Cairo, Dec. 15th.

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*The Inoculation Mishap.—The Spread of the Plague Epidemic.*

THE medical sensation of the week has been the news which has leaked out concerning the sudden cessation of inoculation for plague. In the Punjab it appears that some defect in the serum was followed by 17 deaths from tetanus within 24 hours of inoculation. Up to the present it has been given out that the supply had failed and that the great inoculation scheme was to be postponed until a full supply could be obtained. The real explanation appears to be in the poisonous character of the serum issued from Bombay and not in its deficient quantity. It is reported that after a series of inoculations conducted by a European medical man in the small village of Malkowal near Gujrat several cases of illness occurred and then rapidly became graver. Although suspicion was quickly directed to one particular phial it is tolerably clear that the one phial alone was not the cause of the disaster. In view of the risk that numerous phials might be affected inoculation was immediately stopped throughout the province. The source of contamination has been traced to Bombay. Whether it be that the samples used contained some specific poison or had become decomposed is not made clear. That this mishap may deal a dangerous, if not fatal, blow to inoculation for plague is what must be expected. Pending, however, further details it is impossible to say where exactly the blame lies.

The plague mortality for the week ending Nov. 15th is as follows. The total for the whole of India is 10,441. For the corresponding period last year 8710 deaths were recorded. The details are: Bombay city, 132 deaths; Bombay Presidency, 5877; Madras Presidency, 299; Bengal Presidency, 350; United Provinces, 879; Punjab, 1072; Mysore State, 1029; Berar, 290; and Hyderabad State, 457. Since these figures were published local reports show that the disease is increasing in Bengal, especially in the Saran district, and that between Umballa and Delhi it is sufficiently serious to cause the issue of an order against any troops during the forthcoming manœuvres halting in any of the villages. Reports still continue of its prevalence in Delhi but no figures are published, and in Cawnpore city the disease continues to rage with great virulence.

Nov. 28th.

## THE SERVICES.

### THE PAY OF OFFICERS OF THE ROYAL ARMY MEDICAL CORPS SERVING IN INDIA.

THE Government of India has approved of the following rates:—Lieutenants, 420 rupees per mensem; Captains, 475 rupees per mensem; Captains over seven years' service, 530 rupees per mensem; and Captains over 10 years' service, 650 rupees per mensem. Charge allowance will be given to the medical officers in charge of a hospital, as under: 300 beds and over, 240 rupees per mensem; 200 beds and over, 180 rupees per mensem; 100 beds and over, 120 rupees per mensem; and 50 beds and over, 60 rupees per mensem. Specialist pay at the rate of 60 rupees per mensem will be granted to officers below the rank of Lieutenant-Colonel who may be appointed to posts in India such as would entitle them to specialist pay under paragraphs 36 and 41 of the Report of the Reorganisation Committee.

### ROYAL NAVY MEDICAL SERVICE.

The following appointments are notified:—Fleet Surgeon A. L. Christie to the *Duke of Wellington*. Staff Surgeons: G. E. Kennedy to the *Royal Oak* and J. H. Stenhouse to the *Prometheus*. Surgeons: M. C. Langford to the *Humber*; J. C. Wood to the *Defiance*; W. W. Keir to the *Britomart*; and F. H. A. Clayton to the *Argonaut*.

### ROYAL ARMY MEDICAL CORPS.

Surgeon-General Sir W. D. Wilson, K.C.M.G., Army Medical Staff, has arrived in the Home district for special duty. Lieutenant-Colonel J. W. Irwin has joined at Aldershot for duty as staff officer to Surgeon-General W. H. McNamara, P.M.O.

Lieutenant-Colonel E. North is granted the local rank of Colonel while serving in Mauritius. Dated Dec. 20th, 1902. Lieutenant-Colonel A. G. Kay, from the Seconded List, to be Lieutenant-Colonel. Dated Nov. 29th, 1902.

The undermentioned Lieutenants to be Captains (dated Dec. 4th, 1902):—Frederick H. Merry, Henry C. R. Hime, Charles C. Cumming, Arthur M. MacLaughlin, James A. Hartigan, James F. Martin, Edmond McDonnell, Charles S. Smith, Arthur H. Safford, Angus J. M. Cuddon-Fletcher, Arthur F. Carlyon, James M. Buist, Charles S. Cato, Charles R. Evans, and William C. Crowly.

### VOLUNTEER CORPS.

*Rifle:* 2nd Volunteer Battalion the Northumberland Fusiliers: Surgeon-Captain D. K. Muir resigns his commission. Dated Dec. 20th, 1902. 1st Wiltshire: Surgeon-Captain H. L. E. Wilks resigns his commission. Dated Dec. 20th, 1902. 4th (Donside Highland) Volunteer Battalion the Gordon Highlanders: Ellington Reed Turner to be Surgeon-Lieutenant. Dated Dec. 20th, 1902. 7th (Clackmannan and Kinross) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders); Surgeon-Lieutenant E. E. Dyer to be Surgeon-Captain. Dated Dec. 20th, 1902. 18th Middlesex: Brigade-Surgeon-Lieutenant-Colonel G. D. P. Thomas resigns his commission, with permission to retain his rank and to wear the uniform of the corps on retirement, vacating at the same time the appointment as Senior Medical Officer of the 5th London Volunteer Infantry Brigade. Dated Dec. 20th, 1902.

### VOLUNTEER INFANTRY BRIGADE BEARER COMPANIES.

Gloucester and Somerset: Surgeon-Captain W. Thompson, from the 2nd Volunteer Battalion the Somersetshire Light Infantry, to be Captain. Dated Dec. 20th, 1902. 3rd London: Surgeon-Captain E. Lloyd-Williams, from 4th Middlesex (West London) Volunteer Rifle Corps, to be Captain, and to command under paragraph 55A Volunteer Regulations. Dated Dec. 9th, 1902. Staffordshire: Surgeon-Major C. T. Griffiths, from 1st Volunteer Battalion the South Staffordshire Regiment, to be Major. Dated Nov. 22nd, 1902.

# Medical News.

UNIVERSITY OF CAMBRIDGE.—At the examinations for medical and surgical degrees, Michaelmas term, the following candidates were successful:—

SECOND EXAMINATION.

*Human Anatomy and Physiology.*—I. G. Back, B.A., Trinity Hall; G. F. S. Bailey and J. D. Barris, B.A., Caius; H. J. Boddow, B.A., Christ's; J. H. Board, Pembroke; C. W. Bowle, B.A., Trinity; J. R. Briscoe B.A., H. Selwyn; C. St. A. Coles, B.A., and D. V. Cow, B.A., Trinity; H. P. Crampton, B.A., Clare; F. D. Crew, B.A., Emmanuel; A. N. Dickson, Downing; J. N. F. Fergusson, B.A., St. John's; J. F. Gaskell, B.A., Caius; S. Gooding, B.A., St. John's; H. T. Gray, B.A., Trinity; J. M. P. Grell, B.A., H. Selwyn; E. C. Hardwicke, B.A., Corpus Christi; T. S. Hele, Emmanuel; S. A. Henry, B.A., Trinity; F. S. Hewett, B.A., Caius; V. C. Honeybourne B.A., St. John's; A. B. Howitt, B.A., Clare; C. W. Hutt, B.A., Trinity; W. D. Keyworth, B.A., H. Selwyn; H. E. Kitchen, B.A., Sidney Sussex; P. P. Laidlaw, St. John's; H. T. Lang, B.A., Trinity; C. Lillingston, B.A., Pembroke; S. G. MacDonald, B.A., St. John's; L. H. L. Mackenzie, B.A., Trinity; E. H. Mayhew, B.A., Emmanuel; A. S. M. Palmer, B.A., Jesus; M. Phillips, B.A., Caius; W. O. Pitt, Emmanuel; D. W. Roy, Sidney Sussex; R. B. S. Sewell, B.A., Christ's; A. L. Singer, King's; J. M. Smith, B.A., Christ's; C. Stanley-Clarke, B.A., Caius; W. S. Tresawna, B.A., Sidney Sussex; H. A. R. E. Unwin, B.A., H. Sewlyn; J. E. Venning, B.A., Trinity; R. Wade, B.A., Christ's; and C. F. O. White, B.A., and J. L. Wood, B.A., Trinity.

THIRD EXAMINATION.

*Part II. Medicine, Surgery, and Midwifery.*—H. W. Atkinson, M.A., Caius; L. B. Aveling, B.A., Christ's; G. D. Barton, B.A., Pembroke; E. A. A. Beck, M.A., Clare; F. Bryan, King's; W. F. Buckle, B.A., Caius; R. Butterworth, B.A., Christ's; W. D. Chapman, B.A., Corpus Christi; J. G. Cooper, Trinity; E. E. Cornaby, M.A., Non-Collegiate; H. H. Dale, B.A., Trinity; J. F. H. Dally, B.A., St. John's; H. Davies-Colley, B.A., Trinity; F. P. Edwards, Downing; G. G. Eilett, B.A., Catharine; R. B. Etherington Smith, B.A., Trinity; A. O. M. Fehrsen, B.A., Caius; W. H. Fisher, B.A., Emmanuel; H. U. Gould, B.A., and J. C. W. Graham, M.A., Trinity; C. H. Gregory, B.A., Emmanuel; E. T. Harris, B.A., Christ's; M. C. Hayward, M.A., Caius; D. Holroyde, M.A., Trinity; W. W. Holtzmann, B.A., Christ's; C. R. Howard, B.A., Pembroke; A. W. Izard, B.A., and H. D. Lestward, B.A., Trinity; E. D. Macnamara, M.A., Peterhouse; L. Noon, B.A., Trinity; F. H. Parker, B.A., Pembroke; J. E. Payne, M.A., Peterhouse; F. H. Pearce, Trinity; R. M. Ranking, B.A., Pembroke; C. Roper, B.A., Caius; E. A. Ross, Trinity; T. St. Clair-Smith, B.A., Trinity Hall; E. S. Scott, B.A., Pembroke; A. M. Simpson, B.A., King's; H. Statham, B.A., Christ's; W. M. Strong, M.A., Trinity; H. E. Symes-Thompson, and J. M. Twentyman, B.A., Christ's; H. Wacher, B.A., St. John's; H. Wales, B.A., Sidney Sussex; J. H. F. Wilgress, B.A., H. Selwyn; H. C. Williams, B.A., Pembroke; J. A. Wood, M.A., St. John's; and C. R. Worthington, B.A., Caius.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held in December the following candidates passed in the subjects indicated:—

*Surgery.*—J. E. L. Bates (Sections I. and II.), Guy's Hospital; V. E. M. Bennett (Section I.), Royal Free Hospital; A. N. Collier (Section I.), Manchester; D. Cotes-Preedy (Section II.), Cambridge and St. George's Hospital; W. B. Harris (Section II.), St. Mary's Hospital; J. Hunter (Sections I. and II.), Toronto and Westminster Hospital; E. Knight (Section I.) and M. L. Pethick (Sections I. and II.), Royal Free Hospital; L. C. A. Savatard (Sections I. and II.), Manchester; and G. B. S. Soper (Section II.), Guy's Hospital.

*Medicine.*—V. E. M. Bennett (Sections I. and II.), Royal Free Hospital; J. C. O. Bradbury (Sections I. and II.), Cambridge and Guy's Hospital; W. C. P. Bremner, Toronto; L. Courtauld (Sections I. and II.), Middlesex Hospital; E. H. Griffin (Sections I. and II.), Guy's Hospital; J. D. Keir (Section I.), St. Mary's Hospital; E. Knight (Sections I. and II.), Royal Free Hospital; G. B. S. Soper (Section I.), Guy's Hospital; J. A. W. Webster (Section I. and II.), St. Mary's Hospital; and G. Wilmersdoeffer, (Section I.), Royal Free Hospital.

*Forensic Medicine.*—V. E. M. Bennett, Royal Free Hospital; J. C. O. Bradbury, Cambridge and Guy's Hospital; E. H. Griffin, Guy's Hospital; E. Knight and M. L. Pethick, Royal Free Hospital; H. S. Tumber, Sheffield; J. A. W. Webster, St. Mary's Hospital; and G. Wilmersdoeffer, Royal Free Hospital.

*Midwifery.*—J. E. L. Bates, Guy's Hospital; V. E. M. Bennett, Royal Free Hospital; W. E. Denniston, St. Thomas's Hospital; R. S. Dollard, Royal College of Surgeons in Ireland and Westminster Hospital; A. C. George, Manchester; E. H. Griffin, Guy's Hospital; O. Gutermann, Berlin and Rostock; E. Knight, Royal Free Hospital; W. Martin, St. George's Hospital; H. G. Peel, Leeds; M. L. Pethick, Royal Free Hospital; L. S. Shoosmith, St. Mary's Hospital; and G. Wilmersdoeffer, Royal Free Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—E. H. Griffin, J. Hunter, and J. A. W. Webster.

TRINITY COLLEGE, DUBLIN.—At the examinations at Michaelmas the following gentlemen were successful:—

*Diploma in Public Health, Parts I. and II.*—James E. Carter, M.B., B.Ch., B.A.O.; and Richard H. Kennan, M.D.

THE DEATH OF MR. JOHN KENSIT: TRIAL AT THE LIVERPOOL ASSIZES.—The trial of John M'Keever, aged 18 years, for the alleged murder of Mr. John Kensit, the well-known anti-ritualistic lecturer, who was wounded in the eyebrow by a missile supposed to be a heavy iron file on the evening of Sept. 25th at Birkenhead, was concluded at the Liverpool Assizes on Dec. 11th, the jury returning a verdict of "Not guilty." The injured man was first seen by Mr. G. S. Stansfield who advised his removal to the Birkenhead Borough Hospital, but he preferred to be taken to the Liverpool Royal Infirmary. Dr. G. F. C. Walker, one of the resident medical officers at the Royal Infirmary, deposed to the deceased being admitted to that institution about midnight on Sept. 25th. The result of an examination disclosed an irregular wound a little to the right of the inner side of the left eyebrow. The wound extended to the ridge of bone immediately below. The wound was swabbed out with an antiseptic lotion and an antiseptic pad was placed over it. Next morning the patient was seen by Mr. George G. Hamilton, one of the honorary assistant surgeons, who made an examination of the wound. The wound progressed satisfactorily for the first seven days and the sight became almost normal. The first sign of reaction showed itself on Saturday, Oct. 4th. On the 6th his breathing was affected and his condition became worse. Delirium supervened on the evening of the 6th, which continued until his death on the morning of the 8th. A post-mortem examination revealed septic meningitis at the top of the brain. There was also septic pneumonia of both lungs. There was a fatty heart. The rest of the organs were normal. There were no other signs of external violence. The eyeball had slightly collapsed. Corresponding to the wound there was a small irregular fissure a little to the inner side. Taking the results of the post-mortem examination Dr. Walker attributed the cause of death to the septic wound of the left orbit, followed by septic meningitis and pneumonia. The fatty heart was a contributing agent to the cause of death. The septic poisoning was due to sepsis in the wound. Mr. George Hamilton and Dr. James Barr corroborated Dr. Walker's evidence. Professor Edmond Joseph McWeeney, bacteriologist to the Local Government Board of Ireland, deposed that the evidence he was going to give was based purely upon the records of the post-mortem examination as supplied to him, and upon copies of the evidence given by the medical witnesses before the coroner. He did not think the facts afforded adequate grounds for ascribing the cause of death to septic pneumonia and meningitis due to the wound. He disclaimed any intention to throw doubt upon the knowledge or acumen of the gentlemen who performed the post-mortem examination. He formed his opinion upon the records of what they did. He did not mean to deny that the wound was a septic one, but the characters as stated were not sufficient to enable him to arrive at that conclusion. It would be an absolute contradiction to say of the wound that it was healing in an ordinary and healthy way and to say that it was a septic wound. The evidence given by Dr. Walker as to the normal condition of the spleen absolutely negatived the idea of blood-poisoning, as in the case of blood-poisoning the spleen would be enlarged and soft. Professor McWeeney concluded his evidence by saying that he did not agree with the view that death was due to septicæmia. It has not transpired upon what line of reasoning the jury returned a verdict of "Not guilty." It is a moot point whether the prisoner was acquitted because the jury did not feel certain that he threw the missile or because they were not convinced that the cause of death was not due to independent pneumonia.

SECOND ANNUAL REPORT OF THE NORTHUMBERLAND AND NEWCASTLE MEDICAL UNION.—The Northumberland and Newcastle Medical Union has forwarded to us its second annual report. The details which this document contains confirm the account recently given by our Special Commissioner (see THE LANCET, Nov. 15th, p. 1355, and 22nd, p. 1427, 1902). Though this medical union has only been in existence two years it has been successful throughout the county in raising the subscription paid by colliers for medical attendance to 9*d.* instead of 6*d.* per family per fortnight. The report adds the useful warning as to the danger medical men incur when they bind themselves by an agreement with a lay committee. Thus Dr. Bruce, after many years' practice at Ashington, has been dismissed by lawful notice for insisting upon a payment due to him and is restricted by bond from carrying on medical practice in the neighbourhood. The miners have introduced another medical practitioner in the district and this constitutes one of the few remaining disputes the medical union has on hand. The report also

explains that, after full examination of all the bearings of the question, and acting in conjunction with the County of Durham Medical Union, both organisations resolved to have nothing to do with the National Deposit Friendly Society. The formation of a judicial committee with the aid of the consultants, which we fully described, is alluded to, and we are further informed that Dr. Blake Odgers, K.C., was consulted and drafted rules that will strengthen the position of this committee and will place it on a legal basis. As this committee represents the executive arm of the unions of the two allied counties by which discipline will be enforced it was very necessary that the best legal advice should be obtained and that means of procedure should be carefully studied and defined. We further note that in the course of the year a motion was carried in favour of recommending teaching bodies to institute lectures on medical ethics, a suggestion which merits support.

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS.

*The Session from a Medical Point of View.*

THE session of Parliament opened so long ago as Jan. 16th was prorogued on Dec. 18th. If the short adjournments at Eastertide and Whitsuntide be included and the long autumn adjournment be excluded the session extended over 40 weeks, a period of Parliamentary activity only exceeded in recent experience by the session in which the late Mr. Gladstone introduced his second Home Rule Bill for Ireland. In the way of work of special interest to the medical profession very little was done. During the early part of the session most of the time of the House of Commons was devoted to reform of its rules of procedure and the discussion of a Budget which added one penny in the pound to the Income Tax, making it 1*s.* 3*d.*, and imposed a duty on corn and flour coming to this country from abroad, while the middle and latter parts of the session were almost monopolised by the Education Bill, a measure which places under one authority—namely, the County Council—the whole system of elementary and secondary education and as part of the general scheme gives very substantial monetary assistance to the voluntary schools. In the King's Speech at the opening of the session a Bill was promised to reform the lunacy laws and while the need for such a measure has in no sense diminished, but on the contrary has increased since the promise was made, the Lunacy Laws remain unaltered. For the medical profession the most notable work done was the passage into law of the Midwives Bill. This measure in various forms had been before Parliament, as it had been before the medical profession, for several years, but being promoted, not by the Government, but by private Members, it passed through many vicissitudes. Now, however, it occupies a place in the statute book, owing mainly to the untiring exertions on its behalf of Mr. HEYWOOD JOHNSTONE. It provides for the certification of midwives, for their training and examination, and for a certain measure of supervision when they are in practice. During the passage of the Bill a subsection was introduced which makes it an offence for any woman habitually and for gain to practise as a midwife if she has not been certified. This provision, important in itself, may well prove a valuable precedent in connexion with reform of the Medical Acts and on this account is cherished by medical reformers. Another Bill passed was the London Water Bill, which provides for the establishment of a board to acquire and to manage the undertakings of the metropolitan water companies, and another the Licensing Bill, which strengthens the law with regard to drunkenness and habitual inebriates. Nothing was done with the measure of the General Medical Council for assisting it and the licensing bodies in dealing with "the black sheep" in the medical profession. Although the General Medical Council is directly responsible for what it does to the Privy Council, when it promotes legislation it can only do so through the medium of private Members of Parliament whose powers to assist it are of the most limited character. In this connexion, however, it may be recalled that during the recent session of the Council it passed a resolution to the effect that an active effort should be made, by deputation or otherwise, to secure the interest of the Government in the Bills promoted by the Council. The Bill dealing with the adulteration of butter was introduced by the President of the Board of Agriculture but withdrawn with a promise that another Bill will be introduced early next session. Another promise for next session is legislation on the subject of vaccination. This, of course, is absolutely necessary because Mr. CHAPLIN'S Act is on the point of expiration and must either be renewed or another Act must be put in its place.

## HOUSE OF COMMONS.

WEDNESDAY, DEC. 17TH.

*Epidemic Disease in the Island of Lewis.*

The LORD ADVOCATE, in reply to Mr. WEIR, said that the schools in the Island of Lewis closed since Jan. 1st, 1902, on account of epidemic sickness were as follows: Aird Public School, Stornoway, from March 7th to July 14th; Tolsta Public School, Stornoway, on July 3rd and still closed; Knock Public School (junior section only), Stornoway, from August 25th to Sept. 15th; Bayble Public School (junior section only), Stornoway, from August 23rd to Sept. 8th; Lionel Public School, Barvas, from April 9th to June 2nd; Cross Public School, Barvas, from Jan. 1st to Feb. 18th; Shawbost Public School, Barvas, from Jan. 1st to March 24th; Airidh-an-tuim Public School, Barvas, from Jan. 1st to Feb. 19th; and Carloway Public School, Uig, from Jan. 1st to Jan. 6th.

*Fever in Ross and Cromarty.*

Mr. WEIR asked the Lord Advocate, in view of the fact that the report of the South-Western District Committee for Ross and Cromarty, dated July 26th last, showed that there were several cases of typhoid fever and other infectious diseases in the district during the year, some of which proved fatal, would he state to what cause these outbreaks were attributable; were any public schools in the district closed on account of these outbreaks of disease, if so, how many; and for how long a period did each school remain closed?—The LORD ADVOCATE replied: I am informed by the Local Government Board that the medical officer of the county is of opinion that the outbreak is traceable to the insanitary condition of a house in Loch Carron. The Secretary for Scotland is taking steps to secure fuller information. The schools closed during the year ended July 31st, 1902, in the district referred to were Kintail, Dornie Public School, about two months; Lochalsh, Earbetsaig, about two months; Loch Carron, Strome, about two and a half weeks.

THURSDAY, DEC. 18TH.

*Army Medical Service in India.*

Dr. THOMPSON asked the Secretary of State for India if he would explain the reason of the delay in promulgating the increased rates of pay for the junior grades of officers of the Royal Army Medical Corps.—Lord GEORGE HAMILTON replied: The matter to which the honourable Member refers required, and has received, the consideration of the Government of India. I am now in possession of their views and have communicated my decision to the War Office, with whom it rests to publish the new rates.

*Flash Point of Petroleum Oil.*

Mr. TULLY asked the Home Secretary whether he could state, with regard to the petroleum test in New York, what were the facts as to the test employed in New York State and New York City respectively.—Mr. AKERS-DOUGLAS replied: I will answer this question at some length, because in my answer of Dec. 9th I made a statement with regard to the petroleum test in New York which was not sufficiently explicit and which was also, I find on further inquiry, in some degree erroneous. My statement that the test was an open-fire test should have been limited to the State of Pennsylvania, as regards which it is quite correct. In New York State, on the other hand, I find that a close flash test of 100° by the Elliott Cup test (equivalent to rather less than 100° by the Abel test) has been prescribed by law, but according to evidence given before the Select Committee in 1896 no machinery had been provided for enforcing it; and, so far as I am aware, the same conditions exist at the present time. As regards New York City the same test is prescribed and I understand that effective means are taken to enforce it.—In reply to a further question Mr. AKERS-DOUGLAS said that he could make no statement as to introducing legislation with regard to the statutory flash point of petroleum oil in this country.

*Ladies and Irish Dispensary Appointments.*

Mr. TULLY asked the Chief Secretary to the Lord Lieutenant of Ireland whether he could state why the Local Government Board had endeavoured to have a lady medical officer appointed to the vacant Carrickbyrne dispensary district when the medical men had refused to become candidates at the salary sanctioned by the Local Government Board.—Mr. WYNDHAM replied: The guardians have appointed a medical gentleman to the post of dispensary medical officer at Carrickbyrne. Ladies are not disqualified from holding this position if professionally qualified, but the Local Government Board has never taken any steps to promote their candidature.

*Proposed Standard for Cider.*

Sir EDWARD STRACHEY asked the President of the Board of Agriculture whether he would appoint a committee, consisting of agriculturists and experts, to consider the advisability of setting up a standard for pure cider and to consider what steps should be taken to prevent substitutes for cider being sold as cider.—The following reply was given on behalf of Mr. HANBURY: The provisions of the Sale of Food and Drugs Acts should be sufficient to prevent the sale of adulterated cider and I will instruct our inspectors to call the attention of local authorities to the subject as opportunity occurs. Cases of improper marking could be dealt with under the Merchandise Marks Acts. The setting up of a standard for cider would probably be a matter of considerable difficulty and would certainly require fresh legislation. I hope that we shall obtain assistance in regard to such questions from the proposed Cider Institute which would in that respect supply the place of the committee suggested in the question.

## BOOKS, ETC., RECEIVED.

ALLEN, GEORGE, 156, Charing-cross-road, W.C.

Ruskin on Pictures: a Collection of Criticisms by John Ruskin not heretofore reprinted and now re-edited and re-arranged. Vol. I., Turner at the National Gallery and in Mr. Ruskin's Collection. Price 7*s.* 6*d.* net.

Man's Position in the Universe: A Rough Survey. By W. Sedgwick, Lieutenant-Colonel, late Royal Engineers; author of the "Advance of Knowledge." Price 6*s.* net.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Strand, W.C.

Points of Practical Interest in Gynæcology. By H. Macnaughton-Jones, M.D., M.Ch.Q.U.I., Master of Obstetrics (*honoris causâ*), Royal University of Ireland. Third edition. Price 4*s.* 6*d.* net.

Aids to Gynæcology. By Alfred S. Gubb, M.D. Paris, M.R.C.S. Eng., late Resident Obstetric Physician, Westminster Hospital. Fourth edition. Price, cloth, 2*s.* 6*d.*; paper, 2*s.*

Aids to Forensic Medicine and Toxicology. By William Murrell, M.D., F.R.C.P., Physician to and Lecturer on Clinical Medicine in the Westminster Hospital. Sixth edition. Price, cloth, 2s. 6d.; paper, 2s.

BATSFORD, B. T., 94, High Holborn, W.C.

Modern School Buildings, Elementary and Secondary: A Treatise on the Planning, Arrangement, and Fitting of Day and Boarding-schools, having special regard to School Discipline, Organisation, and Educational Requirements. By Felix Clay, B.A., Architect. Price 25s. net.

BLACK, ADAM AND CHARLES, Soho-square, W.

Who's Who, 1903. An Annual Biographical Dictionary. (Fifty-fifth year of issue.) 5s. net.

The Englishwoman's Year-book and Directory, 1903. Twenty-third year. (Fifth year of new issue.) Edited by Emily Janes, Organising Secretary of the National Union of Women Workers of Great Britain and Ireland. Price 2s. 6d. net.

CHATTO AND WINDUS, 111, St. Martin's-lane, W.C.

Herbert Fry's Royal Guide to the London Charities. Edited by John Lane. Price 1s. 6d.

CHURCHILL, J. & A., 7, Great Marlborough-street, W.

Cancer and other Tumours of the Stomach. By Samuel Fenwick, M.D., F.R.C.P., Consulting Physician to the London Hospital, and W. Soltau Fenwick, M.D. Lond., M.R.C.P., Senior Physician to the London Temperance Hospital. Price 12s. 6d.

Second Treatise on the Effects of Borax and Boric Acid on the Human System. (With two Supplements.) By Dr. Oscar Liebreich, O. O. Professor der Universität Berlin und Geheimer Medizinalrat. (Translated from the German.) Price 2s. 6d.

Reports of the Society for the Study of Disease in Children. Volume ii. Session of 1901–1902. Edited by George Carpenter, M.D. Price 12s. 6d.

GRIEN, WILLIAM, AND SONS, Edinburgh.

Encyclopædia Medica. Under the General Editorship of Chalmers Watson, M.B., F.R.C.P.E. Vol. xii. Syphilis to Typhus Fever. Price not stated.

HARRISON AND SONS, 45, St. Martin's-lane, W.C.

International Catalogue of Scientific Literature. (First Annual Issue.) C. Physics. Vol. IV., Part I. 1902 (August). Published for the International Council by the Royal Society of London. Price 21s. (The price of each annual issue is £18.)

HARTUNG, H. UND SOHN, Leipzig.

Vorschriften aus dem Gebiete der Krankenpflege. Von Dr. med. A. Heermann, Oberstabsarzt in Posen. Price M. 2.

HOLDER, ALFRED, 1, Rothenthurmstrasse, 13, Wien.

Die Erkrankungen der Nieren. Von Professor Dr. H. Senator in Berlin. Zweite, umgearbeitete Auflage. Price not stated.

HUMPHREYS, ARTHUR L., 187, Piccadilly, W.

The Imperial Yeomanry Hospitals in South Africa, 1900–1902. Edited by the Countess Howe. Vol. I., Organisation and Administration. Vol. II., With the Imperial Yeomanry Field Hospital and Bearer Company. Vol. III., Medical and Surgical Reports. Price not stated.

HUTCHINSON, WILLIAM AND CO., Trafalgar-buildings, Charing-cross, W.C.; and ROBERT T. ATKINSON, Salisbury House, London-wall, E.C.

The "Via Eastern" Telegraphic Social Code. Issued under the authorisation of the Eastern Telegraph Company and other Companies. Compiled by Robert T. Atkinson. Price 5s. net.

# Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ADAMS, EDWARD W., M.D. Lond., has been appointed Honorary Assistant Demonstrator in Pathology at University College, Sheffield.

ARNOLD, FRANK ARTHUR, M.B., D.P.H. Lond., L.S.A., has been appointed Medical Officer of Health for Middelburg District, Transvaal.

BEESLEY, CLARENCE, L.R.C.P., L.R.C.S. Ed., L.F.P.S. Glasg., D.P.H. Cantab., has been re-appointed Medical Officer of Health for the Budleigh Salterton Urban District Council.

BUZZARD, E. FARQUHAR, M.D. Oxon., M.R.C.P. Lond., has been appointed Assistant Physician to the Royal Free Hospital.

CHICK-LEWIS, JAS. R. G., M.R.C.S., L.S.A. Lond., has been appointed Medical Officer to the Brading Branch of the Hampshire Friendly Society.

CURTIS, H. J., B.S., M.D. Lond., F.R.C.S. Eng., has been appointed Surgeon to the North-Eastern Hospital for Children, Hackney-road, N.E.

DUDGEON, LEONARD S., M.R.C.S., M.R.C.P., has been appointed Pathologist to the East London Hospital for Children and Dispensary for Women.

EMERSON AMBROSE, M.B., B.C. Cantab., has been appointed House Physician to the East London Hospital for Children and Dispensary for Women.

FARQUHARSON, J. MALCOLM, M.B., M.R.C.P. Edin., has been appointed Surgeon in charge of the Throat Department of the Eye, Ear, and Throat Infirmary of Edinburgh.

FRASER, T. P., M.B., Ch.B. Aberd., has been appointed House Surgeon at Grimsby Hospital.

GORDON, J. LESLIE, M.B., C.M., has been re-appointed Senior Assistant Medical Officer to the Metropolitan Asylums Board Asylum at Tooting Bec, London.

PEARSON, S. VERE, M.B. Cantab., M.R.C.P. Lond., has been appointed Assistant Physician to the East London Hospital for Children and Dispensary for Women.

POLLARD, CHARLES, F.R.C.S. Eng., has been appointed Honorary Surgeon to Worcester General Infirmary.

RIVIERE, CLIVE, M.D. Lond., M.R.C.P. Lond., has been appointed Assistant Physician to the East London Hospital for Children and Dispensary for Women.

ROWLANDS, E. P., F.R.C.S. Eng., has been appointed Assistant Surgeon to the East London Hospital for Children and Dispensary for Women.

VERLING-BROWN, C. R., M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Physician to the Great Northern Hospital, Holloway-road, N.

WALKER, T. MALCOLM, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health to the Banbury Rural District Council.

WATKINS-PITCHFORD, WILFRED, M.D. Lond., F.R.C.S. Eng., D.P.H. Oxon., has been appointed Assistant Bacteriologist in the Government Research Laboratories, Pietermaritzburg, Natal.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

BIRKENHEAD BOROUGH HOSPITAL.—Senior Resident Male House Surgeon. Salary £100 per annum, with board.

BRECON AND RADNOR ASYLUM, Talgarth, R.S.O.—Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, board, attendance, and laundry.

BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Resident House Physicians for six months. Honorarium £25.

CANCER HOSPITAL, Fulham-road, S.W.—Junior House Surgeon for six months. Salary £70 per annum, with board and residence.

CANTERBURY BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £120 per annum, with apartments, board, and laundry.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with apartments, board, attendance, &c.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

GREAT YARMOUTH HOSPITAL.—House Surgeon. Salary £90 per annum, with board, lodging, and washing.

INDIAN MEDICAL SERVICE, India Office.—Thirteen Appointments in His Majesty's Indian Medical Service.

JARROW-ON-TYNE PALMER MEMORIAL HOSPITAL.—House Surgeon, unmarried. Salary £120 per annum, with board and residence.

LIVERPOOL ROYAL INFIRMARY.—Assistant Honorary Surgeon.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Surgeon. Salary £100, with board, lodging, and washing.

NOTTS COUNTY ASYLUM, Radcliffe-on-Trent.—Assistant Medical Officer, unmarried. Salary £130, rising to £150.

ST. BARTHOLOMEW'S HOSPITAL.—Assistant Physician. Also Assistant Surgeon.

SAMARITAN FREE HOSPITAL, Marylebone-road, N.W.—Clinical Assistants.

SOUTH LAMBETH, STOCKWELL, AND NORTH BRIXTON DISPENSARY, Albert-square, Clapham-road.—Visiting Medical Officer.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon, unmarried, for six months, renewable. Salary at rate of £70 per annum, with residence, board, and washing.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—Physician to Out-patients.

# Births, Marriages, and Deaths.

## BIRTHS.

ARMOUR.—On December 22nd, at Bentinck-street Mansions, the wife of Donald John Armour, M.B., F.R.C.S., of a daughter.

SLAUGHTER.—On Dec. 17th, at Brondesbury-road, N.W., the wife of E. A. Slaughter, M.D. Dub., of a son.

## MARRIAGES.

HALE—WADD.—On Dec. 17th, at St. Matthias's Church, Richmond-hill, Major G. E. Hale, D.S.O., R.A.M.C., to Kathleen, youngest daughter of Dr. Wadd of Richmond-hill, Surrey.

MALCOLM—TOPHAM.—On Dec. 17th, at the Church of St. John Baptist, Penzance, by the Rev. H. G. Topham, assisted by the Rev. S. Childs Clarke (father of the bride) and the Rev. T. F. Madrell (vicar), John D. Malcolm, F.R.C.S. Edin., of 13, Portman-street, W., to Frances Sophia, widow of Edward C. Topham, of Kilkhampton, N. Cornwall.

MATURIN—DANIELL.—On Dec. 16th, at St. Thomas's Church, Lymington, Hants, Francis Henry Maturin, B.A., M.B., to Nora Elfrida, elder daughter of the late Henry Daniell, Esq., and Mrs. Daniel of Highfield, Lymington, Hants.

## DEATH.

LETT.—On Dec. 19th, at Cliff-parade, Wakefield, Richard Alfred Lett, M.D. Dub., aged 55, only son of the late Richard Lett, M.D., of Ballyrane, co. Wexford, Ireland.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, Dec. 23rd, 1902.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Rainfall. | Solar Radiation in Vacuo. | Maximum Temp. Shade. | Min. Temp. | Wet Bulb. | Dry Bulb. | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Dec. 17 | 29·86 | S.W. | 0·02 | 60 | 58 | 47 | 54 | 56 | Overcast |
| ,, 18 | 29·90 | N.W. | 0·63 | 71 | 51 | 49 | 45 | 49 | Cloudy |
| ,, 19 | 30·24 | N.W. | ... | 52 | 51 | 45 | 44 | 47 | Cloudy |
| ,, 20 | 30·21 | W. | 0·03 | 70 | 53 | 47 | 47 | 48 | Overcast |
| ,, 21 | 30·31 | N.W. | ... | 56 | 52 | 47 | 50 | 51 | Cloudy |
| ,, 22 | 30·48 | N. | ... | 53 | 51 | 50 | 49 | 50 | Foggy |
| ,, 23 | 30·56 | S.W. | ... | 48 | 46 | 45 | 43 | 45 | Overcast |

# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY** (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

**TUESDAY** (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.).

**WEDNESDAY** (31st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

**THURSDAY** (1st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

**FRIDAY** (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

**SATURDAY** (3rd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

## SOCIETIES.

**THURSDAY** (1st).—RÖNTGEN SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. G. M. Lowe (Lincoln): X Ray Work in Private Practice.

NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital, N.).—4 P.M. Discussion (opened by Mr. H. Carson).

**FRIDAY** (2nd).—SOUTH-WEST LONDON MEDICAL SOCIETY (Drill Hall, Clapham Junction, S.W.).—Special Meeting to consider the course to be pursued in the present situation between Mr. Troutbeck, the coroner for the district, and the local practitioners of medicine. All members of the medical profession are invited to be present.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**TUESDAY** (30th).—ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—3 P.M. Prof. H. S. Hele-Shaw: On Locomotion, on the Earth, through the Water, in the Air. (Christmas Lectures adapted for Young People.)

**THURSDAY** (1st).—ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—3 P.M. Prof. H. S. Hele-Shaw: On Locomotion, on the Earth, through the Water, in the Air. (Christmas Lectures adapted for Young People.)

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*Hiresute* and *Belladonna.*—We fear that no treatment would be available in the first case. In regard to the second case we think that the publication of our correspondent's letter would be very inimical to the interests of the patient.

*W. A. T. S.*—It seems to us from our correspondent's account that the fee is not owing, but a solicitor's opinion based upon the terms of the agreement would clear up the matter.

*Ignoramus.*—No; attendant circumstances would have to be considered.

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IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

# MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1902, which is completed with the issue of to-day, will be given in the next number of THE LANCET.

### VOLUMES AND CASES.

VOLUMES for the second half of the year 1902 will be ready shortly. Bound in cloth, gilt lettered, price 12*s.*, carriage extra.

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**During the week marked copies of the following newspapers have been received:**—*Hampshire Chronicle, Kent Messenger, Glasgow Evening News, Blackpool Herald, Burton Chronicle, Dundee Advertiser, Lincolnshire Advertiser, Aberdeen Free Press, Western Daily Mercury, Wiltshire Mirror, Yorkshire Post, Newcastle Journal, Hereford Mercury, Daily Chronicle, Dublin Express, Times of India, Daily News, Daily Graphic, Huddersfield Examiner, Sanitary Record, Local Government Chronicle, &c.*

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